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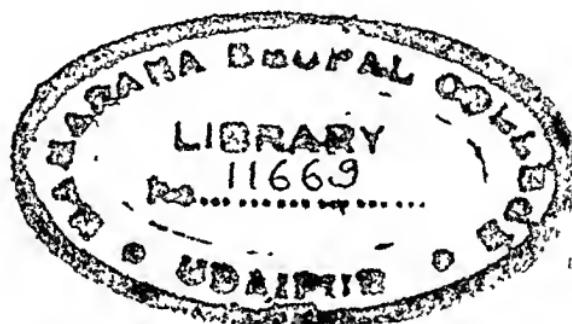
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INTRODUCTION TO ECONOMICS
FOR
INTERMEDIATE COMMERCE STUDENTS

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DEDICATED

TO

Syt. Madan Mohan, M. A.

An ideal teacher, one who has accepted the sacred cause of educating and training the youth of his country as his life's mission and who has won sincere respect and admiration of the author.

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PART I

CHAPTER I

Introduction

There are certain sciences whose subject-matter is man himself. Among these are sciences which are concerned with the study of human beings, not as isolated specimens, but as members of social groups—families, tribes, village, states, nations. These sciences are called social sciences because they study man in his various relations with his fellowmen. Economics is one of those social sciences and holds a prominent place among them. In Economics we study "*the efforts of man as a member of society for getting a living and spending that living and all other activities related to these two main activities.*"

The particular province of economics which distinguishes it from other social sciences is derived from two natural reasons. First, the characteristic of human wants, and second the natural environment in which man lives.

Human wants.—Man in common with all species of animal life has certain needs which must be met or he will die. He must have food and water, he must have air to breathe. His body should be protected from excessive cold or heat and hence man requires certain forms of clothing and shelter according to the climate. Man is also subject to attack by natural enemies, and therefore he must have the means to defend himself or to escape. These are man's organic-needs which must be met otherwise he will perish. We call them: "Primary wants" or "Necessities of life."

But unlike animal, man does not stop at the stage when necessities of life are met. With man the necessities are only the beginning. No sooner are they met than he feels new wants and craves for the satisfaction of those wants. Thus wants go on multiplying, they occur in unending chain never to be fully satisfied. After satisfying his necessities man passes on to "comforts" and then to "luxuries" the end of which can never be seen.

An illustration will make it clear. Food is necessary to prevent death by starvation. But that is not what an average person thinks about when he eats his food. To the original hunger instinct has been added a large number of tastes and desires, so that we demand of food much more than it keep us alive. This is why we want different kinds of dishes at our dinner table so that our tastes may be met. The necessity of protection from heat and cold gives rise to the want of clothing. But to the modern civilised man or woman clothing is not only needed because of its cold-resisting qualities but it is more

The above discussion fully brings about the fact that in Economics we study the activities of man (not as an isolated being but as a member of the society) direct towards the satisfaction of his material wants or in other terms which are backed up by 'Economic motive'.

The reader should not forget that Economics does not study all the activities of the man. Man performs many other activities which give him pleasure, mental satisfaction, and spiritual satisfaction. For instance, boys play foot-ball and other games because it pleases them, a patriot serves his country and suffers incalculable hardship because he loves his country, and a religious minded man performs numerous religious activities. But there is no Economic motive behind these activities and therefore Economics has nothing to do with them. On the other hand a cultivator does not work hard on his farm because it pleases him but because it gives him a living. A labourer works in a factory not because it pleases him but because he gets a monthly wage from the factory owner. A doctor attends to the patients because he gets a salary for his work. All such activities of the man (as a member of society) which are backed up by the Economic motive come within the purview of Economic Science. If the reader keeps in mind the above discussion he will never get confused about the subject-matter of Economics.

✓ **Division of Economics.**—In order to study the Economic activities of man on scientific lines it is necessary that they should be divided into different departments, because man's economic activities are not carried on with only one object in view. The object of certain economic activities may be production of wealth, while other activities may have consumption as their object. Certain other activities are mainly directed towards the exchange of wealth. In a similar manner distribution of wealth may also be the object of some activities. The economic organisation of the present-day society is very complicated and therefore the economic activities have to be studied from various points of view, namely 'Consumption,' 'Production,' 'Exchange,' and 'Distribution' of wealth. Accordingly Economics has been divided into four main divisions or branches—Consumption, Production, Exchange and Distribution. In view of the important role played by the Modern State in the economic life of the community Economics of Government of which Public Finance is the important aspect is added as the fifth division of Economics.

Though for scientific study of the subject it is necessary to create these divisions yet it must be remembered that these divisions cannot be altogether isolated from the others. They

are closely related to each other, and this is why we should find out how they are inter-related and inter-dependent.

Inter-relation of Divisions of Economics :—

(1) Consumption of wealth :—Since the existence of man's wants is the starting point of all economic activity therefore consumption or theory of wants should be treated first.

By consumption of wealth we mean the use of wealth for the satisfaction of wants for material and non-material things. Therefore in consumption we study all about man's wants and their satisfaction. Such as the characteristics of and classification of wants, the law of diminishing utility, the law of demand, Engel's Law of Family Expenditure etc.

(2) Production of wealth.—In production we study all about the Production of Wealth, such as the main factors of production, namely land, labour, capital and organisation, the different branches of production : agriculture, mining, fishing, forestry and manufacture, the laws of production, and industrial organisation etc.

Relation between production and consumption.—The two activities are closely related and interdependent. If man has no wants to satisfy production of wealth will cease because the sole purpose of production is consumption. Production is the means and consumption is the end. Similarly production influences our consumption to a very great extent in as much as it determines and limits our consumption and thus determines our standard of living. Those countries which are economically advanced or in other terms which produce much more wealth per head like United Kingdom, or U. S. A. enjoy a much higher standard of living than economically backward countries like India, China, and Persia with their low production.

Exchange of wealth.—Under the present day complicated economic organisation no one is absolutely self-sufficient. Specialisation is the rule of the day. Everybody specialises in the production of a particular commodity or service. A carpenter produces tables and chairs only but he wants wheat, cloth, and schooling to his son. The farmer has specialised in wheat production, the weaver in cloth production, and a teacher in teaching. All of them in turn want the carpenter's tables and chairs. This is only possible when the carpenter exchanges his tables for the wheat with the farmer, cloth with the weaver, and schooling to his son with the teacher. In the present economic organisation everybody specialises in producing some particular commodity or service and therefore everybody has to exchange whatever he has produced for what he does not produce. Exchange is thus an essential part

of our economic system. Without exchange specialisation in production is not possible. Specialisation in production or division of labour is the basis of modern production. Under exchange we will have to discuss the basis of exchange and valuation, the mechanism of exchange—markets, money, credit, and banking, and trade.

✓ **Relation between Production and Exchange.**—As has been shown above most of the production now-a-days is for the market and not for the direct satisfaction of producer's own wants. Without the facilities of exchange this sort of specialised production is not possible. The two are closely inter-related. In fact exchange is the last link in the chain of production, which is incomplete unless the commodity or service that is produced is placed in the hands of the consumer.

✓ **Relation between Exchange and Composition.**—If facilities for exchange were not available every one of us would have been forced to live a self-sufficient life. We could not get anything for consumption which we did not produce. But under the present economic system facilities for exchange have enabled us to consume innumerable kinds of commodities and services. Exchange these days serves the link between production and consumption. In fact, under the present day economic organisation exchange is unavoidable for consumption.

✓ **Distribution of wealth**—Sharing out the wealth produced, among the various factors that have co-operated in its production is called the distribution of wealth. There are four principal shares (a) Rent, the share of nature or land (b) Wages, the reward of labour (c) Interest, the income of capital (d) Profits the remuneration of enterprise. The present day economic organisation is so complicated that it is not easy to correctly determine the share in the produced wealth which should go to each of these factors of production. This is why the subject of distribution is the most controversial one in the whole field of economics, and raises some of the most important current economic controversies and problems, e.g., the class war between capital and labour, and socialism.

✓ **Relation of distribution to consumption.**—The relation between consumption and distribution is not difficult to ascertain. Until the wealth produced is not apportioned between the different factors of production how it can be consumed? Moreover the share of wealth which a particular production class gets determines its standard of living and thus distribution of wealth affects the consumption or, in other words, the standard of living of the different productive classes.

✓ **Relation of distribution to production of wealth.**—The total aggregate of wealth produced determines the share of

each factor of production. The volume of wealth available for distribution and the shares of the various factors depend on the efficiency of the productive system. In economically advanced countries like U. S. A. the total wealth production is enormous and hence the share which the various productive classes get is also very much higher than in the backward countries. But production in turn is influenced by distribution : for instance if the distribution of wealth is very unjust so that the major portion of the community's wealth goes to a small class of rich persons and the vast majority of people are extremely poor in that case the productive machinery will be engaged in producing articles of luxury for the rich. If on the contrary the wealth is more evenly distributed the articles of luxury will be produced in very small quantities, mostly those commodities will be produced which will be needed by an average consumer. This will result in a higher standard of living of the labourers which in turn shall enhance their productive capacity.

Relation of distribution to exchange.—Distribution and exchange are also closely inter-related. The share of each factor of production is determined on the basis of theory of exchange (value). In the present day economic organisation, everybody produces jointly with others therefore the problem of distribution does arise, and the various shares rent, wages, interest and profits are just like prices paid for obtaining the services of the respective factors of production. The share of the various factors of production are determined in the same manner in which the value of a commodity is determined.

5. Economics of Government (Public Finance).—These days under the influence of socialist doctrines and the changing social and political conditions there is a growing tendency of the State to undertake many of the economic functions. Public finance is the most important economic function which every State performs. Under Public Finance we have to study how the State raised its revenue and in what manner it spends that revenue. Besides Public Finance the modern State also undertakes economic planning, controls the prices, controls the consumption in abnormal circumstances. All these problems have to be studied under this head.

Relation of Public Finance to Production.—Leaving aside the direct production by the State and the effect of economic planning on the general production of wealth the way in which the State collects the taxes and spends the revenue so obtained, considerably influences the wealth production in a country. For example if a tax is levied on the production of jute articles in India the manufacturing of jute may get a set-back. On the contrary if a tax is levied on an imported article such as

cotton cloth or sugar it may give rise to a greater production of cotton cloth and sugar in the country. Similarly if the public expenditure is incurred in the interest of the community as a whole and the home made goods are preferred it will give rise to greater production and flourishing industries. Thus it is clear that the way in which taxes are collected and the revenue spent by the State greatly influences the production of wealth in a country.

Public Finance and its relation to consumption.—It is not at all difficult to find out the relation between Public Finance and consumption inasmuch as taxes reduce the consumption of taxed commodities. If the State levies a heavy tax on a certain commodity its consumption is bound to decrease and if the State encourages the production of a particular commodity either by giving monetary help to the producers or by protecting the industry the consumption of that commodity is bound to increase. In those countries where consumption is greater the State will secure greater revenue by taxing consumption goods, and if consumption is small the revenue so obtained will also be small.

Relation between Public Finance and Distribution —The way in which the taxes are raised and the expenditure is incurred, greatly influences the distribution of wealth in the community. If the revenue raised by levying the taxes is mostly spent for providing education to the poor, medical help, better sanitary conditions and such other activities it has a wholesome effect on the distribution of wealth because thereby the evils of uneven distribution of wealth are mitigated to some extent. Besides this the taxation policy of the State can either encourage the uneven distribution of wealth, or discourage it. If the burden of taxes falls upon poor and rich alike it is bound to create greater disparity of wealth distribution. But by adopting progressive taxation which will fall heavily on the rich the State can remove the evils of economic disparity to a certain extent.

Similarly distribution also influences Public Finance. If the distribution of wealth is more or less even the standard of living of the general masses will be much higher and their productive activity will be greater. The increased production of wealth will result in greater prosperity of the factors of production and the State will get greater amount of income from taxes. The reverse will be true if the wealth is very unevenly distributed in the community. The above discussion clearly brings the relation between Distribution and Public Finance.

Relation of Public Finance to Exchange.—It is not at all difficult to understand the relation of Public Finance to

Exchange. We have already discussed how under the present day complicated economic organisation exchange is a necessary connecting link between the different divisions. Exchange is the centre round which the present day economic mechanism revolves. Just as exchange is necessary for production, consumption and distribution it is also necessary for Public Finance. For example, until the commodities are exchanged the State will not be in a position to raise any revenue by levying taxes on consumption goods. Moreover it is through exchange also that the State can spend money on different State activities.

The above discussion clearly points out that the different branches of Economics are interdependent and inter-related and they cannot be altogether isolated.

Scope of Economics.—After studying the subject-matter of Economics one has to study its scope. In other words, we have to find out the view-point underlying the study of man's activities in relation with wealth which is the subject-matter of Economics. In Economics we study the man's activities in relation of wealth, but this is not enough for scientific study of the subject. We should know our view-point underlying such study. The narrowest view-point of our study of man's economic efforts can be restricted to the knowledge of those laws only which control the economic activities of man. An illustration will make it clear. While studying the wages of labourers whether we shall stop at that stage where we find out the laws which determine the wages under the existing conditions or we will proceed further and will try to find out whether that is the correct method of determining wages. If we find out that the existing method of determining wages is not the correct one, shall we proceed further and arrive at an ideal method for fixing wages. The view-point of the study of economic activities can still be widened. That is after finding out what should be our ideal as regards determination of wages we may not be satisfied but we may make an effort to study those laws as well which should be applied to achieve that ideal in practice. Thus the economic activities of man can be studied from the above-mentioned three points of view. We have to decide which point of view we should adopt.

If we restrict ourselves to the study of the existing laws only which govern the economic activities of man then Economics will be designated as a Positive Science. But if we also study their appropriateness or otherwise and if we find them wanting and proceed a step further and try to find out the ideal, we will call Economics a Normative Science. But if do not stop at this and try to know all about those factors which are necessary to achieve the ideal in practice then Economics is treated both as a Science and Arts. Therefore in order

to determine in clear terms the scope of Economics we will have to decide whether Economics is a science or an Art, and this in turn requires that Science and Art should be defined.

"A Science, deals only with the relations of cause and effect within its own field. It does not start with the notion that something is desirable or undesirable ; nor does it arrive at any such conclusion as its result. It has no business to offer precepts or prescriptions. Its sole single concern is to trace effects back to their causes to project causes forward to their effects.

"An Art, on the other hand, starts with the assumption that a certain thing is desirable or a certain other thing is undesirable, that something is good or something is an evil. The object it seeks is to ascertain how the good may be attained, or the evil avoided. In making this inquiry, it makes use of the principles, or laws governing the relations of cause and effect, which have been ascertained by the sciences that have in any way to do with its own subject-matter. As a result, its issues certain precepts and prescriptions for the guidance and assistance of those who would gain the good or avoid the evil which that particular art has in contemplation, whether it may be the art of navigation, or of gardening, or of architecture, or of mining.

The first matter to discuss therefore is whether the aim of Economics is theoretical or practical or both. The old school of Economists specially British Economists believed that Economics is a positive science and economists should restrict themselves to the study of economic-phenomena, its cause and effect, and on the basis of this study they should frame the "economic laws. This does not mean that they did not realise the great influence which the social factors exercise on the economic activities of man. They were fully aware that social, moral and ethical factors play an important part in determining the economic activities of man, but as economists they did not think it necessary to pay any attention to them. They argued that social progress requires knowledge of material or economic requisites of human life, and this knowledge can best be provided by strictly scientific study, and therefore the economists should restrict themselves to this.

Another view-specially German economists holds strongly that the nature and circumstances of Economics justify a more practical treatment and a more idealist approach. For this there is a psychological reason. Many are attracted towards Economics not because of its scientific charm but because they see in it a means to make the world better than they find it, they are only attracted by the more realistic approach to the subject. They argued that the physical processes of nature are unalterable

by human agency and therefore we seek to understand them without approving or disapproving them, and therefore a purely scientific treatment becomes practicable; but human institutions can be changed and modified by human action and therefore we feel it our duty to make an attempt to pass our judgment upon them. They refused to narrow down the scope of Economics to the study of economic phenomena in their existing form but they also wanted to find out whether the result of such study was desirable or undesirable and what should be our economic ideal in that respect. Besides this they also thought it necessary to study ways and means to achieve that object. In other words they recognised Economics as a Positive Science, a Normative Science and an Art at the same time.

In fact Economics is both a pure science and an applied science, as are chemistry or mathematics. In other words it is both a science and art. The science is normally required first in order that we may know, since practical action can be effective only when the facts have been clearly and accurately presented. Otherwise from lack of knowledge the desired results may not be achieved.

Economic study, thus falls into two parts, a pure science or economic theory, and an applied science, both practical and descriptive. Economic theory is predominantly positive. It attempts to adhere strictly to the rules of scientific inquiry and excludes much that is important in practical affairs.

In applied Economics attention is also paid to non-economic factors. Thus various considerations which may be out of place in economic theory are relevant to its practical side.

Thus the modern economists are more inclined towards widening the scope of economics but it should not be forgotten that for the scientific study of the subject it is necessary to study it as a positive science. Of course the practical economist will have to study it also as a normative science and Arts.

Economics is a Separate Science (Economics and Sociology)—There are some who prefer to treat Economics as a branch of Sociology, which is the general science of man and of social relations or society. In their opinion all aspects of social life are so closely connected that a special study of anyone of them will be useless, and therefore they asked the economists to abandon their special study of economics and devote their energies to sociology which is an unified and all embracing social science. A little thought to their reasoning will expose the fallacy of their contention. It is very difficult to study the whole range of man's actions in the society because it is too wide and too varied. In studying these varied activities of an in the society specialisation becomes necessary and

inevitable. There is not the least doubt that social forces act and react upon one another, and therefore no science has well defined boundaries. It is also true that the subject matter of economic science "man's activities in relation with wealth" can not be treated in isolation from the social phenomena related to religion, state, ethics, and law, particularly when the economist touches the practical problems of welfare. But for making a scientific study of the subject it is necessary to treat it as a separate science and study it as such.

The best way would therefore be, while treating economics as a separate social science, to discuss its connection with other social sciences.

Economics and Politics.—Economics as we know deals with man's activities in pursuit of wealth, while politics deals with government and the relations of the citizens to the State. Economic activities of the society are very much affected and influenced by the policy laid down by the State in relation to trade, taxation, labour conditions, land management etc. In fact these days the State directs the whole economic machinery by controlling production, consumption, exchange (price), and distribution. On the other hand economic conditions of production, and distribution considerably influence the form and the functions of the government. For example the structure and the functions of a pastoral country or a predominantly agricultural country are very much different than those of highly industrialised country. More-over the economic prosperity of a country absolutely depends on good government and a sympathetic and progressive economic policy of the State. In recent times the economic functions of the State have multiplied fast and therefore the points of contact between economics and politics have increased, and there is a better appreciation of each other's point of view on the part of the politician and the economist.

Economics and Jurisprudence.—In a similar way there is close relationship between these two social sciences. The law determines what an individual may or may not do. In making legislation for a country the economic and social conditions prevailing in a country are always kept in mind. It is no exaggeration to say that legislation is the out-come of country's economic and social condition. On the other hand the laws of the country influence the economic life of the country to a very great extent. For example in those countries where the modern large scale factories have been established and a large factory worker's population has congregated in the industrial centres; factory laws regulating the hours of work and working conditions in the factories—workman's compensation Act, and Trade disputes laws had to be passed to give protection to the

of men. For example Pig farming may be a very profitable business but a Muslim will never take it up because of his religious belief. Poultry industry is not carried on by Hindus in general. The caste system checks Hindus from entering into certain occupations though the wages may be high there. Such examples can be multiplied indefinitely and they go to show how economic activities are influenced by religion.

Economics and Psychology.—The relation between Economics and Psychology is very intimate, because the economic activities of man are influenced by his psychology. For example the man's desires and their satisfaction and the effort he makes to satisfy them are essentially psychological and Economics studies these activities of man. In recent times increasing attention is being paid to industrial psychology. The fact is that economist while studying such economic problems avails of the fundamental principles and conclusions of psychology.

Economics and Economic History.—Economics and the Economic History are closely related. The study of the one without the other is bound to be incomplete. An example will make it clear. In order to exactly know the effect of a proposed tax on production and consumption of a particular commodity we will have to look to Economic History for our guidance. In a similar way if the state wants to make laws regarding the labour or land their future effect on the nation's economic life can only be ascertained by referring to the Economic History.

Economics and Statistics.—Economics and Statistics are also closely related because many economic problems can only be studied by statistical method. For instance if we have to study the rural indebtedness in India we will have to study the statistics about the indebtedness of the rural population. Moreover the effect of a certain tax or the economic policy of the state can only be ascertained by studying the statistics. But one thing should not be forgotten, the statistical method or inductive method is very helpful for purposes of illustrations, but it can be depended upon too much for formulating economic laws.

Economics and Mathematics.—These days economic laws are also studied with the help of mathematics. For example extensive use is made of graphs, diagrams, equations, and algebraic formulae in studying certain economic problems like theory of value, law of Diminishing utility, Quantity of theory of money, and others.

Economics and Physical Sciences.—Economics is not only related to those sciences which study man and his activities but it is also related to Physical sciences which study Nature. After

combined in the ratio of two to one water is sure to be produced, it can not be checked, this law of chemistry is exact and universal. Economic laws are neither so exact and nor so universally true. Economic Laws rather represent tendencies or principles expressing what is likely to happen, other things being equal, than laws in the stricter sense, which are universal and invariable. Pure Economic Laws are often statements of tendencies, or of what usually happens, rather than of what must happen.

This can be illustrated by taking the Law of Supply and Demand. The law is that demand increases with every fall and diminishes with every rise in price, and supply increases with every rise and diminishes with every fall in price. But the immediate effect of a rise in price may be a temporary increase in demand, because people rush to buy from fear of a further rise, as happened during the war of 1939. A fall in price, again may at first cause sellers to sell increased quantities from fear of a further fall while buyers restrain from purchasing in hopes of such a fall. This in fact, is a regular feature of the opening stages of a trade depression. To take another example the patriotic people induced by patriotic sentiments prefer to pay higher price for home made goods. Similarly the seller may be moved by humanitarian motive and may charge a reasonable price for his goods knowing full well that he could as well charge much higher price if he liked. Thus it is clear that there is no universality and exactness in the case of Economic Laws.

The reason is not very difficult to find. Economic laws are concerned with the relations of men in their dealings with wealth, and describe their usual or normal actions, though human beings can not always be relied upon to act in the ways suggested. Because men are not constant units like chemists, atom. Naturally, the laws of Economics are not exact as those of the natural sciences. Human beings do not always act under the influence of economic motive but they also act under the influence of motives like love, justice, and service.

Moreover the operation of Economic laws may be prevented or modified not only by the vagaries of human nature, but by the influence of a variety of causes. With every change in the social relations there comes a change in economic facts also. Economic facts more-over can be modified by human effort. For example the tendency to diminishing returns becomes dormant when improvement in the technique of agriculture takes place. As has been noted above there is a set of laws, for instance, not a single law of supply and demand. The effects of one principle therefore are often counteracted by another and more powerful one.

propositions or assumptions. From these we draw a number of conclusions and see how far they are supported by actual facts. If the facts do not support our conclusions, we shall find out the reason, and may succeed in discovering the existence of counteracting causes ; or we may find it necessary to accept a certain correction and ratification of our original assumptions. For instance on the basis of our knowledge of human nature we know that men prefer happiness to sorrow, and greater happiness to lesser happiness. Based on this assumption or generalisation we can argue that man will be prepared to pay a higher price for a commodity which gives him greater happiness or satisfaction. After reaching this conclusion we will verify it by studying the actual facts and ascertain how far our conclusions are valid. In short deductive method proceeds from general to particular. Thus if we say that all human beings are mortal and therefor " A " shall die because he is also a human being—this will be an example of deductive method.

On the other hand in inductive method we draw upon economic history, statistical records or personal observation, and collect what appears to us to be a sufficient number of particular instances, from which we proceed to generalise. These generalisations are again verified and tested by referring to actual experience, and amended if necessary.

For example in order to ascertain the relation between the wages of labourers and their productive capacity we observe and collect the data about the working capacity of a large number of labourers in different industries. Our observation reveals us that if the wages of labourers are raised their productive capacity also goes high and with the fall in wages their productive capacity goes down. On the basis of this inquiry we will conclude that by raising the wages of labourers their efficiency increases. After drawing this conclusion we will verify its validity by applying it to actual facts, and if found necessary will modify it. In short we can say that in inductive method we proceed from particular to general.

There has been a long controversy among economists regarding the suitability of these methods for economic study. The English classical school of economists applied deductive method in their investigation and tried to deduce the whole of economic science from certain generalisations about human motives and habits. The classical economists were too abstract and assumed too confidently that their abstracts corresponded with the facts. The critics of classical economists assert " It is wrong to believe that their generalisations about human motives and habits are always true ". In practical life of human beings one finds them behaving contrary to those general assumptions. For example those who believe in deductive method start with the

assumption that human beings are solely guided by gain and loss in their economic behaviour. All their conclusions are based on this assumption. The critics assert that this basis is itself is faulty because human beings even in their economic behaviour are influenced by family love, patriotism, and religious ideas besides the motive of profit and loss. There is much truth in this contention because we find cases in our daily life in which a villager does not wish to leave his native village even though he may be assured of a much higher wage in the city. The love of his family and village checks him from leaving his village. Similarly patriotic people usually purchase home made goods even at a higher price. Thus it has been proved that man in his economic behaviour is also influenced by other motives besides profit and loss.

This over emphasis of deductive method led to the development of another school of Economists who believed that inductive method was the only right method of economic investigation. But these economists went to the other extreme and suggested that generalisations could never hold true in the case of man's economic behaviour, and therefore the conclusions drawn on the basis of those generalisations were bound to be far from correct.

Accepting that besides profit and loss motive, the family love, patriotism, religious ideas etc., also influence the economic behaviour of man one has to accept that ultimately the profit and loss motive is the strongest and most common.

Similarly the critics of the inductive method over emphasised the weaknesses of this method. They maintained that the present day economic organisation was so complex that it was not possible to correctly study it and hence laws framed on the basis of such study and observation could not be true. Secondly the subject matter of Economics was man, and therefore experiments were impossible in Economics.

While one has to accept that economic phenomena are complicated and there are little facilities of experiment in Economics we can not accept that it is neither desirable nor practicable to observe and study the economic phenomena. In fact it is difficult to understand certain economic problems without making such observation. For instance if we want to find out the effect of better houses, trade unions, and Factory Acts on the efficiency of labourers we will have to take the help of inductive method.

The above discussion clearly brings out the fact that this controversy is fruitless. Both the methods are required for the study of Economics. In fact both seem to be complementary rather than rival methods. The difference between them is

rather of emphasis than of principle ; and some times one and sometimes the other will be more effective. In some cases for instance it is more urgent to ascertain new facts and in others to "scrutinise our reasoning about facts which we already possess." For example ' production of wealth is usually treated by inductive method, comparing and generalising from observed facts. But in the departments of exchange and distribution the deductive method has been adopted because they are very complex and the observation of facts is not easy. Again the deductive method seems most suited to matters of pure theory and, the inductive to the practical application of Economics.

Modern writers are now all agreed that both these methods are equally necessary. Marshall rightly puts, " Induction and deduction are both necessary for the science just as the right and left foot are needed for walking."

Assumptions of Economics.— In order to get correct results Economists have used the conception of the Economic man. It has been assumed that Economic Man always seeks pleasure and avoids pain, and for him pleasure consists in the pursuit of wealth and pain in doing the necessary work to obtain that wealth. Further, the Economists hold that the Economic Man is subject to free competition, he moves from place to place, and from occupation to occupation, as directed by his self interest. So that the labourers will move to place and occupations where they can earn the highest wages. Similarly the capital will flow in the direction of the highest interest.

These assumption are not entirely true but they are true enough as starting points for study of economic phenomena. Because the economic motive exercises the most powerful and continuous influence on man's activities. It is not denied that other motives, love, national sentiment etc. do not exercise any influence on human conduct. In certain cases they exercise considerable influence but in the long run the economic motive proves the most powerful and therefore by assuming that man is guided by economic motive in his conduct Economists are not very far from the truth. The question whether this characteristic of human nature is not deplorable the Economist can only say that the motive of economic betterment is not less commendable.

Importance and value of a study of Economics.—Before closing this chapter it is necessary to answer a question. Why a study of Economics is necessary ? There can be two purposes of studying a subject first enhancement of knowledge, second—possibility of making some profit out of it. A little thought will convince us that the two are inseparable. Knowledge which is of no use for the human being is not worth acquiring.

It is no use wasting time and labour on it. The study of Economics is necessary from both the points of view.

Economics studies man to a much greater extent than any other Social Science. The way in which a man earns his living is a great factor in making the man what he is. For instance if a man is very poor, his poverty becomes the greatest obstacle in the way of his progress in life. His personality can not develop. Therefore the happiness and general prosperity of man and the society depends upon, their economic condition. In order to make the society happy, progressive and prosperous it is necessary to abolish the evil of poverty from the society. Economics tells us the plan of fighting the evil of poverty. If economists can discover that such and such causes lead to the increase of national wealth, and such other causes lead to the decline of national wealth, the Government will naturally encourage the former and discourage the latter set of causes. So the study of Economics is of great utility to a statesman.

As the poverty of the masses is directly attributable to the present economic organisation therefore the study of the present day economic system and organisation is necessary to all those who are working for the economic uplift of the masses. The greatest utility of Economic study lies in the fact that it tells us the way to abolish the poverty the greatest evil of the present day society therefore the social reformer, the Trade Union Worker, those who are interested in rural uplift and such other activities must make a thorough study of Economics.

A study of Economics will tell us how the production of wealth in the country can be increased that is in other terms how agriculture, industries, trade, and commerce of the country can be improved and developed, how the distribution of the wealth may be carried on so that better relations between the employers and the labourers may be maintained. Thus the study of Economics is of great use for the industrialist, the business man and all those who are working for the progress of the society. In fact economic progress is the basis of all progress and therefore the investigations of Economics are of greatest practical value and its study is necessary for all, those who have the good of the society at heart.

CHAPTER II

Development of Economic life.

The present day economic organisation is so complex that it is difficult to grasp the significance of its main features. The present economic system has been vehemently criticised by many writers specially socialists and they are working for its total destruction. Therefore in order to study Economics and to be in a position to pass judgement upon the present social order it is necessary to make a thorough study of the evolution of economic life from its early stages to the present highly complicated industrial stage.

As a basis for this study it will be worth while to study other systems which man has evolved to solve the economic problems of life. This will serve two purposes. Not only will it enable us to understand the modern economic organisation better, but it will also give a back ground which will be helpful in evaluating modern institutions and methods.

Evolution of Industrial Stages.

We may conveniently divide the course of man's economic development—studying it from the stand point of producing goods into five stages as follows :—

- (1) Hunting and fishing stage.
- (2) The pastoral or nomadic stage.
- (3) The agricultural stage.
- (4) The handcraft stage.
- (5) The Factory stage.

} Industrial stages.

The evolution of economic society may, from the point of view of the economic unit, be divided into the four following stages :—

- (1) The stage of independent economy.
- (2) The stage of town economy.
- (3) The stage of national economy.
- (4) The stage of world economy.

Again, if we study the evolution of economic life from the stand point of man's ways of exchanging goods after they have been produced, we can divide it into the following three stages :—

- (1) The stage of barter economy.
- (2) The stage of money economy.
- (3) The stage of credit economy.

It must not be understood that stages are distinctly or sharply separated. The transition from one stage to the other stage

is so slow that one can hardly perceive it. Moreover it should not be assumed that all of the features of an earlier stage disappear when men enter in a new stage. In many cases all of the features of the old survive along side with the features of the new stage. For instance in India barter economy is still prevalent along with money and credit economy. In the modern age of industrialisation agriculture has not disappeared though the method of cultivation has undergone a great change, and with the help of agricultural machinery intensive cultivation is being carried on. Besides this it should not also be assumed that in every case the order of man's economic development has been the same as noted above. In certain cases the order of economic development has been different and in certain other cases man was living in two stages at the same time. To sum up it is difficult to say specially after the first initial stages—that the evolution of economic life in all the countries and at all the times had taken a definite course.

Hunting and Fishing Stage.—In the first stage of man's economic development man more or less lived a life which was like that of animals. For thousands of years man lived in the hunting stage. He used to live in caves and dug outs and used to depend upon the gifts of nature for his maintenance. In fact in the initial stages he did not depend so much on hunting as on the bounty of nature—in the form of fruits and edible roots found in the forests. But all the same he used to hunt smaller animals with the help of weapons made of wood, stone, and bone. Gradually during thousands of years with the invention of fire and employment of metals the weapons and tools improved enormously and man became a very efficient hunter. Now he mostly depended on hunting for his maintenance.

In this initial stage of man's economic development nature was the greatest factor of production. There was little labour and practically very little capital. Man mostly depended on the bounty of nature. His labour took the form of appropriating for himself the gifts of nature. He did not know the art of domesticating animals and multiply and preserve them by breeding. Nor even did he store goods in time of abundance against a future time of dearth.

Economic activity in this stage was in a high degree isolated. The work of producing or getting goods was carried on in the single family, each family producing most of the things which its members required. For this reason, there was little or no exchange or transfer of goods.

As there was little exchange of products or division of labour hence there were no economic classes. The greater part of

property-including all land was the common possession of the tribe or the social group, private property being confined to weapons, house-hold goods, and the immediate reward of labour.

- The condition of life in hunting stage prevented the possibility of any but a very sparse population. It has been estimated that in a population living solely on the products of the chase each hunter requires for his support more than fifty thousand acres, or seventy-eight square miles. It followed from this need of large territories that war became an economic necessity whenever there was not an abundance of unoccupied land. This need of large territories also forced the hunting tribes to frequently migrate and to seek new food resources.

- As might be expected, primitive tribes of fishing people were more peace loving than hunting tribes. Their population was denser because a smaller area was sufficient for the support of a given number of people. Having less need of frequent migrations in search of new food resources. They build dwellings of a more permanent nature, and constructed boats and fishing implements. On the whole the power of man over nature was greater among fishingmen than among hunting tribes.

The Pastoral Stage.

- When hunting tribes ceased to depend for food supply solely upon the killing or capture of animals and began to domesticate and breed them they entered into the Pastoral stage. In fact during their hunting stage they came into close touch with the different animals and they established a sort of friendship with them. It struck to them that instead of killing the animals if they could be tamed the problem of food would be more satisfactorily solved than by hunting. This induced the hunters to tame certain animals. First of all he tamed the horse and gradually the dog, cattle, sheep and goat were also tamed and bred. Thus hunters mainly became animal preservers. Every family tried to keep a herd of animals and thus they became more certain of their food supply. This did not mean that they gave up hunting altogether. Now hunting was not their main source of food supply.

- Man now began to live chiefly upon his flocks, but he still left the flocks upon what they could find in the forest. So instead of wandering for his own food supply he had nevertheless to migrate for the food of his flocks. Therefore there was no possibility of towns and cities coming into existence during Pastoral stage. Moreover though the land could now support comparatively a larger number of inhabitants than before yet

a large area was still needed for pasture, and tribes and families wandering about in search of luxuriant forest frequently against each other. According to the estimates made by geographers, nomadic populations require, on an average, a square mile for every two to five persons.

Wanderings of whole people were very common due in some cases to the exhaustion of old feeding grounds and in others to the natural increase in the numbers when a tribe had long been established in one place.

Even in Pastoral stage there was no ownership of land in the sense in which we now regard ownership. Tribes as a whole claimed a particular district for a time and did not allow other tribes to use those pastures. But individuals of the tribe did not own any land. But private property in other things than land did appear in pastoral stage. Flocks, gold, silver and precious stones got accumulated. Animals were the source of all wealth and therefore wealth was measured in the terms of cattle heads. Thus differences in the wealth of individuals did come in existence and rich and poor were sharply contrasted with one another.

In spite of the growth of wealth among individuals there was practically no exchange or commerce, because exchange only takes place when the wealth is diversified. As there was no attraction for exchanging ox for ox, cow for cow, the trade and commerce could not develop. The economy of each family or household was mainly self sufficient.

Agricultural Stage.

Gradually man learnt the art of cultivation. Even in the hunting stage he was well acquainted with different plants and their use. Man knew what plants are more useful as suppliers of food and other requirements. He had already domesticated useful animals, preserved them and multiplied them by breeding. Now he learned to manage plants and began to raise them at will. The process was simple, the different kinds of plants used to grow in the forest it was by destroying the useless plants and allowing the useful ones to remain on the land that modern agriculture started. Later on in order to economise land further and to grow a larger quantity of food from a given area of land even the useful plants were cut down, land was made soft by digging and the seed of the useful plant was put in the soil at uniform distance. This was the beginning of modern agriculture.

Thus agriculture as a means of support was added to the living of flocks and to the chase. A greater variety of food was made for man, who now ceased to wander. The

result was that a much denser population came into existence. It has been estimated that the early agricultural populations were about six times as dense as the pastoral populations. With a denser population remaining permanently at one place villages and towns began to grow. New relations sprang up among men, new duties, new arts, and new possibilities of civilisation made their appearance.

With growing density of population and increasing permanency of settlement private ownership in land began to be established. Successful cultivation of soil requires personal care and attention and therefore some sort of division of the land became necessary. The first parcelling of the land, by no means, gave rise to permanent private ownership. The tribe or community still owned the land and its division was recognised as temporary for the purpose of cultivation only.

With the development of agriculture more persistent labour was needed on the land, and therefore the institution of slavery developed among agriculturist communities. So far the captives of the war were killed, but now they were made slaves and put to the task of tilling the soil. Disparity of wealth became more pronounced. But even after this change the agricultural household or families were largely self-sufficient and hardly any occasion to deal with the outside world arose. There is no doubt that with the increase of wealth the tendency to trade also increases, but the occasion for trade was slight as men's wants and wealth were still the same everywhere.

Commercial stage.—All the same a little commerce did originate after man entered into agricultural stage. In the case of coastal peoples the fishing and the commercial stages appeared at the same time without the intervention of agriculture. It should be remembered that the agricultural stage was not altogether superseded by the later commercial and industrial stages although it was greatly modified. For example extensive agriculture was replaced by more intensive methods of cultivation, and during recent times in most of the countries agriculture is getting mechanised or industrialised, so that the organisation of a modern agricultural farm is becoming more or less similar to that of a factory.

Later stages of Economic development.

As has been mentioned above there was no invariable order in which one stage followed another. Specially in the later stages it is extremely difficult to say which stage preceded and which followed. Moreover no useful purpose will be served by trying to study this historical order. Specially in the later stages i.e. Industrial Stages, it is much more useful to study

economic development from the fundamental point of view of the relation between producer and consumer. This involves the study of the improvement in the method of production, the introduction of division of labour, the widening of markets and the growing use of money and credit in the society.

There are roughly four stages of industrial development—
 (1) Family Economy (2) Handicraft system (3) Domestic system
 (4) Factory system (capitalist or industrial economy).

Family Economy or Household system.

In this period the family lived a life unto itself. Almost all the goods consumed by the family were made by the members of the group, for there was practically no trade with outsiders. There did exist a little division of tasks among the members of the family according to their natural aptitudes and inclinations, but the opportunities to develop special skill were very limited and every member of the family had to perform a large number of tasks. Naturally under such conditions of life the standard of living was low because only a limited number of commodities could be procured. It was a very simple organisation lacking most of the common features of modern life. There was virtually no exchange and hence there was no need of money. No wages were paid as all were working for the family and shared in the common produce. Of course there were slaves in the family who were made to work for the family, but even they were not paid wages as they also were part of the family. The amount of capital used for production was limited to a few tools and implements.

Handicraft (Guild) system.

Gradually the self-sufficiency of the families broke down and a class of professional craftsmen appeared. It happened that under the pressure of heavy work the family was forced at times to take the help of outsiders, specially carpenters, cobblers, etc. They were supplied with the necessary materials by the family which invited them to help in their work. But with the growth of populous towns and cities and abolition of slavery those casual craftsmen set up themselves as permanent and independent craftsmen, who began to work in their own cottages, with their own tools and on their own raw materials, and sold their goods in their own shops. Along with their handicraft they also carried on cultivation. Production was still on a very small scale, there was no middleman or intermediary between the producer and the consumer. The craftsmen, weaver, smith, cobbler, carpenter, and potter, etc used to get orders from the villagers or the towns-people and they produced for order. The market was very near at hand and there was a direct touch

between the producer and the consumer. A special feature of this system was the formation of craft guilds and merchant guilds. These craft guilds and merchant guilds were associations of the members of a trade or occupation.

Craft guilds.

In due course of time every craft or trade requiring any skill gave rise to a guild. These guilds regulated the quality of the products and their price, and also looked after the welfare of their members. In the beginning each guild regulated its affairs also in the public interest. A regular system of training in the craft was evolved and a new entrant became a master craftsman only after passing through the stages of apprenticeship and journeymanship. In order to ensure greater effectiveness in regulating the trade both in the interest of the craftsmen and the public a monopoly in each craft was granted to the guild of that particular craft. In the beginning every thing went well because guilds were interested in acquiring greater influence through a large membership, but later as the position of guilds became very strong and they were firmly established, the monopoly power was used to eliminate all competition, and admittance to guild was made very difficult. As pointed out above the guild made regulations to secure honest workmanship, to fix prices in the interest of the community. But later on they only cared to keep in their own hands the monopoly of the trade concerned and thus their main object did not exist anymore.

Merchant guilds.—Similarly the merchant guilds were organised for the purpose of protection to the members at a time when law and order had not developed to the point where it was safe for a merchant to travel about the country alone. Later on they became so powerful that they secured the monopoly of the trade of the town, and competition from outsiders was avoided. This is the famous guild system of Europe.

The guild system could only work so long as the market was local and narrow. But it broke down with the development of commerce at the end of the Middle Ages. Another cause of their decay was the abuse of their monopoly and privileges by the guilds.

In India as well we had a similar organisation in occupational castes and their panchayats. The functions of these occupational castes were similar to those of craft guilds. Though the system still exists in India it is rapidly losing its strength under the changed conditions.

The Domestic system.—As time went on there was a change along two lines. In the first place a greater degree of specialisa-

tion appeared and some crafts were divided into distinct trades. Thus weaving, fulling and dyeing became separate trades and were carried on by independent workers. Secondly, the craftsmen were gradually losing their independence and were on the way of becoming wage earners.

There was little change in the technique and method of manufacturing, but the craft-guilds lost power over their trades and independent craftsmen established their crafts in the country side. But the chief change appeared in the control and direction of the industry. A class of commercial middlemen came on the scene who acted as intermediaries between the actual workers in their small home workshops and the final purchaser. The widening of the market being both cause and the result of their appearance.

The worker was no longer an independent craftsman working directly for the consumer but executed orders of the merchant middleman, who supplied the raw material and in some cases the tools and implements. Thus the craftsman lost the touch with the consumer and became a wage earner of the merchant middleman.

The explanation of this change is very clear. In the handicraft stage the artisan worked for a market which was at hand. The consumer himself gave the order to the artisan. In course of time with the increase in trade the market for his articles expanded and he had to produce for an unknown and distant market. The artisan was ill-fitted to carry on the task of marketing his wares in distant markets as he was the manufacturer of goods and not a merchant. Therefore there was a definite need of a middleman, because the risks of marketing grew enormously. At this stage the merchant middleman stepped in and shouldered the risks of marketing.

The development of Handicraft system and the Domestic system necessitated exchange operations to be carried on to a much greater extent than before and this in turn brought about a more fundamental change in the growing need of money as a medium of exchange. The self-sufficiency of individuals was broken and specialisation in production was very much pronounced.

But Domestic system brought about a very significant change. Customary methods of production broke down and capitalistic production in a new sense began—capitalistic in the sense that capitalist and the worker were divorced. The real producer became a wage earner.

The trade was expanding ; large profits were being made by the merchants, but the opportunities for investing these savings were confined to lines with which the merchants were personally

allied. It was but a natural step from buying the products of a manufacturer, to giving him orders, supplying the material, and even furnishing the instruments of production. Some even went so far as to collect the workers in separate buildings. This was the prevailing condition when factory system came to be established.

Factory system.

Domestic system of manufacture was current in England during the first part of the eighteenth century, a system which involved scattered workers using their own or hired machines in their own cottages by a capitalistic manufacturer.

But in the course of the eighteenth century there were changes in the technique and method of production of such a nature which revolutionised the whole industry. The period in which these changes came about is called the "*Industrial Revolution*". The Factory system was the direct outcome of the Industrial Revolution and therefore it is necessary to know what industrial revolution, really meant.

Industrial Revolution.

The changes brought about in technique and method of production by the invention of machines and locomotives and application of steam power to industry and transport, and also the changes brought about by their application in the conditions of life of labourers constitute industrial revolution.

The invention of machinery, locomotive and steam power necessitated the large scale production and the establishment of big factories. Because machines were a costly affair, the poor artisan could not possibly own the costly machines. Huge amount of capital was needed to buy the necessary plant and other equipment of a factory. The industrial revolution thus involved the displacement of the domestic system of manufacture by the factory system, a great extension of division of labour, the invention and perfection of machinery in all lines of manufacturing, mining, and transportation, and consequently an enormous increase in the out-put of the industry.

The rise of the factory system created many social changes which were of great consequence. It brought about congregation of workers in the industrial centres. The labour was subjected to the discipline of the factory. A class of capitalists came into existence which became too powerful and the labourers were placed at the mercy of these capitalists. This led to the beginning of the labour movement, and thereafter the clash between capitalists and labourers became very serious and acute. The rise of a powerful capitalist class brought about great political changes. Democracy became a show of capitalists,

in fact they became the rulers of the country. Thus in almost every phase of social, political, and economic life conditions were altered, new relationships were established.

The factory system in its turn brought about a great disparity of wealth, a few mill owners were rolling in wealth and the vast majority of masses were reduced to abject poverty. In fact the factory system has given rise to many of the problems of the modern economic life which have not yet been solved. But all the same the production of wealth under factory system has increased to an enormous extent.

The development of factory system has brought forth another problem of monopolies and trusts. Huge trusts have been formed, they are controlled by a few big capitalists and they virtually control the whole economic life of the country. These evils of the factory system are taxing the brains of the thinkers of our age.

With the development of the factory system the division of labour has been reduced to perfection and the credit economy has taken the place of money economy. International trade has grown out of all expectations and the mechanism of exchange and credit has become most complicated for an average person.

But one should not forget that in the factory age other industrial stages have not ceased to exist. For example, domestic system prevails in almost all countries of the world specially in those industries which depend more on human skill, such as watch-making, lace making, and silk weaving, etc.

CHAPTER III

Some Fundamental Economic Conceptions.

In order to clearly understand Economics the beginner must acquaint himself with the correct meaning and conception of certain economic terms which are frequently used in Economics. It is even more necessary because these economic terms are also commonly used in every day language, and therefore there is every likelihood of misunderstanding cropping up as regards the meaning of these words. The meaning of these terms may be a bit different for the economists because they use these words in a special sense. Therefore for scientific exactness these words should be defined in the very beginning.

Utility—utility is very commonly used both in Economics and every day language. In every day language the word utility denotes usefulness. For instance we say 'Milk has a great utility.' But in Economics we use the word in a special sense meaning thereby the *power of satisfying our want*. If any commodity has the power of satisfying our want it will be said to possess utility. Even poison has utility because it has the power of satisfying want. It has nothing to do with its usefulness or otherwise. If any commodity possesses the power of satisfying human wants it will be said to possess utility.

Goods.

The circle of Economics is one of 'wants, efforts, satisfactions'. But all satisfactions are not economic in character. Economists use the word 'goods' to cover all those things, whatever they may be, which satisfy any want or desire of man.

Economic goods. Goods are of two kinds (1) Free goods, and (2) Economic goods. *Free goods*—which are available in abundance or in unlimited quantities, so that nobody need spend any amount or make any effort to procure them. Moreover because of their abundance nobody has ever cared to establish private individual ownership over them. The idea of private property has not developed so far in their case. This is why these free goods are never exchanged. For example, 'air' and 'water' are in most cases 'free goods'. Though both these are essential for the life of man yet they are in most cases available in such great abundance that nobody has to spend any amount to procure them, they are not owned by any individual so that they may have to be purchased from them. Similarly 'sunshine', and the 'rains' are also free goods because their supply is not limited and every individual can use them as he likes. But in special cases water or air may cease to be free goods. For instance in hot months in India electric fans are used to provide air in the room and costly plant has to be set up to

take fresh air in the mines, and canals have to be constructed to irrigate crops at a huge cost. In these cases water and air have ceased to be free goods. Sand in the desert is free goods but in a city where it is needed for building purposes and is not available in abundance it ceases to be such. Thus anything which is available in abundance so that everybody can use it as much as he likes will be known as ' free goods.'

Economic goods.—All those goods which are not classified as free goods are known as ' economic goods '. Economic goods are known as '*wealth*'. Now we shall study more about the term '*wealth*' round about which the whole structure of Economic Science stands. Before passing on to the term *wealth* it is advisable to give a positive definition of ' Economic goods '. Goods the supply of which is scarce in relation to demand are ' economic goods '. When the available supply is not sufficient to satisfy all demand that article is scarce in economic sense. The line between ' Free goods ' and ' Economic goods ' is thus not a definite one. Water in the homes of a modern city or to the cultivator is economic goods while it is ' free goods ' to a man living near the river side. Under the complexities of modern life, more and more free goods are passing into the category of economic goods.

Looked from another point of view economic goods are those goods which are '*transferable*' and which are '*external*' to man. Nobody will like to have a thing of which he cannot be the owner, therefore '*transferability*' is an essential feature of ' economic goods '. By *transferability* we mean that the ownership can be transferred and in this sense it is transferable. In order to be transferable a thing should also be '*external*' to a man, because the ownership of things which are internal to a man cannot be transferred, and therefore nobody would pay anything for them. But *transferability* presupposes scarcity because nobody would pay anything for the ownership of free goods.

Wealth.—As mentioned above "Economic goods" are '*wealth*'. Hence in order to be classified as *wealth* a thing must possess the following attributes : (1) it must possess utility i.e., it must satisfy a human want (2) It must be scarce (3) It must be transferable (4) It must be external to man.

These attributes are very simple to understand. Nothing will be classified '*wealth*' which does not satisfy human want. But mere utility will not make a thing *wealth*. It must be scarce in relation to demand. In other words it should not be in such abundance that it can be procured by anybody without effort or payment. Usually all such scarce goods will be the result of human effort. Though there may be a few such goods

which may be scarce and all the same may not be the result of human effort such as meteoric-stone etc. The third attribute of wealth is transferability, so that the ownership can be transferred from one person to another.

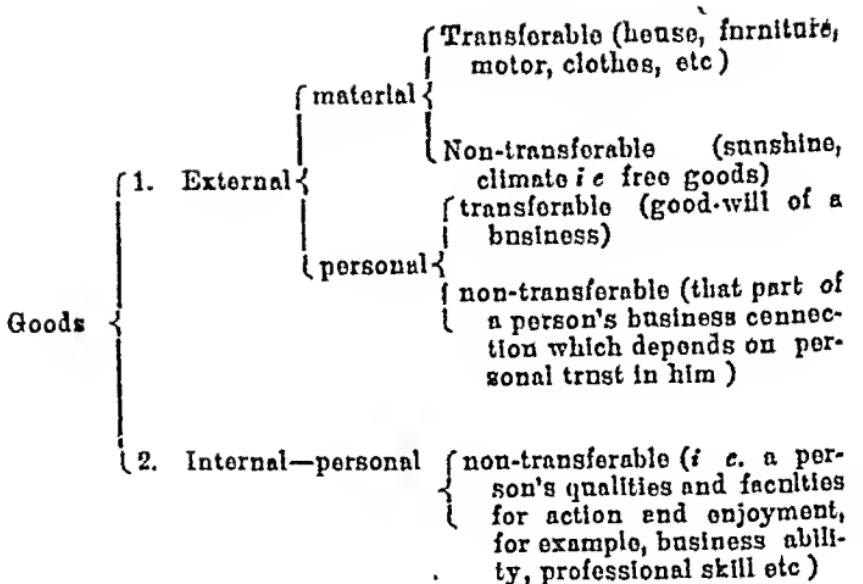
Anything which possesses the above mentioned attributes will be sold and purchased ; thus instead of enumerating these attributes we can also say that all those goods which are 'exchangeable' are wealth.

The above definition of the term ' wealth ' does not suggest that only material things are wealth. Even the services of a domestic servant or a labourer in a factory, for which wages are paid, the professional services of a lawyer, a doctor, and a singer for which fees are paid are all wealth. But the various services of a mother to her child which are rendered by her out of love and affection towards the child are not wealth because they are not bought and sold.

A man's internal qualities and aptitudes, for example the special skill of a surgeon, singer, or an artist are not wealth because although they may be a source of wealth, but they are not themselves transferable.

But non-material external goods consisting of relations beneficial to a man with other people are wealth, because they can be bought and sold. For example when a business changes hands, the price for ' Good-will ' or good name of the business is also paid. Good-will consists of the advantage which a business has acquired, the connections which it has established so that the chances are that even after changing hands the old customers will patronise that business. Thus the good reputation of a business which is known as ' good-will ' is wealth. In the same way a retiring doctor, or lawyer may also sell his practice.

The following classification of wealth given by Marshall will be of great help to the students in clearly understanding the correct meaning of the term ' wealth '.



Thus we can say ' wealth ' consists of external-transferable and external personal-transferable goods.

Individual Wealth —In order to ascertain the wealth of a person we will have to include the following items :—

(1) In the first place all the material possessions exclusively owned by the individual will be included. Such as his bungalow, furniture, car, horse or cow, books, clothes, landed property etc. These are all transferable and exchangeable. Individual wealth also includes any share in companies, partnership, debenture bonds, deposits in the bank, mortgages, and all debts which others owe to him, requiring others to pay money or goods to him. On the other hand in order to ascertain his true wealth we must deduct all those debts and obligations which he owes to others.

(2) Secondly we will include all those non-material goods which belong to that individual but are external to him and which enable to acquire him material goods for example his business connections, and specially the good-will of his business which can be transferred by sale. But we will exclude his personal skill and qualities because they are internal to him and cannot be transferred to anybody else.

(3) Thirdly a man enjoys certain goods not individually but in common with others in the society. All such material and non-material goods which are enjoyed by an individual in common with others must be included while ascertaining the wealth of an individual. For example every citizen has the right of using public property and institutions—such as roads, street lights, public parks, museums, hospitals, etc. The individual subject also possesses the right to justice, protection, free education. All these must be included in ascertaining

his wealth. Ordinarily when we compare the wealth of two persons living in the same country we do not take them into consideration because they are equally enjoyed by both.

National Wealth.—The wealth of a nation consists of the following items :—

(1) In the first place we should total up the individual wealth of every citizen of the country. In calculating the individual wealth we should not take into account that wealth which individuals enjoy in common with others. Moreover in calculating national wealth all internal debts due from one member of the nation to another should be omitted in order to avoid double counting of the same item. But we must deduct all those bonds which are held by the foreigners or any other foreign debt of the country from the national wealth. At the same time we must add to the national wealth of a country all those bonds and shares which are held by the members of that nation.

(2) Secondly in order to calculate the national wealth we must include all public property such as roads, canals, railways, buildings, forests etc. Out of this wealth the public debt which the State has incurred should be deducted.

(3) Thirdly there are certain economists who include some of the most important free gifts of nature which influence national wealth. Such as the rivers like Ganges, Sind, Brahmaputra, Himalayas, may be included in Indian national wealth. While there are other economists who recognise these free gifts as the basis of wealth and not the wealth itself.

(4) Certain economists are in favour of including such non-material elements in the national wealth which help the production of wealth. Such as a free well-ordered State, or the industrial capacities of the people. In this connection we should not forget that while we can include in a nation's wealth all those advantages and privileges which it enjoys over other nations, but we shall have to exclude all those advantages which are cosmopolitan in character. For example scientific inventions may take place in one country but they are readily adopted by rival nations and thus they become universal.

International wealth.—International wealth can be ascertained by adding up the wealth of all nations in the world. While finding out the aggregate of national wealth on the globe we must exclude international debts which one country owes to others. Under international wealth we may include such things as the oceans which facilitate commerce and must be regarded as one of the most valuable assets of the world. But it will be more accurate and logical to treat oceans as the

basis of wealth rather than wealth itself. But scientific inventions and such other things which are not the absolute property of any one country must be included in international wealth.

Income.—After studying the concept of wealth it is imperative to study the true meaning of the term income. There are two measures of wealth : (1) Income and (2) Capital. "*Income consists of benefits or services rendered by wealth or by free persons.*" By benefits or services of wealth we mean desirable events which it causes for human beings. Protecting the body from cold is the desirable event caused by warm clothing. The service of a fountain pen is in enabling a person to write ; thus every article of wealth renders some service to man else it would not be useful and so would not be wealth. In exactly the same way services are rendered by free persons as when a teacher teaches in the class and a doctor attends on a patient. The word income is therefore used to include such services and benefits.

In popular language we will define income as "*a flow or stream of satisfactions or of gain, which a man regularly and continuously receives for his services after a definite period of time.*" An example will make it more clear. If a man serves in an office and gets a salary of one hundred rupees per month, his income is rupees one hundred per month. If over and above this cash income he also enjoys a free quarter to live in the gain from that house (monthly rent) will also be added to his cash income. Thus his monthly income may be rupees one hundred and ten. Similarly, if a man lends rupees ten thousand to another person and gets rupees one thousand in the form of interest his income from interest will be rupees one thousand per year. In the same way if a landlord gives his land on a yearly rent of rupees five hundred his income from rent will be rupees five hundred per year. The above discussion about income brings forth the following three fundamental facts :—

(1) **Income is a flow and not a fund.**—There is this fundamental difference between income and wealth, while income is a regular stream which flows like a river, wealth is a fund. When income is measured it is always in reference to an appreciable length of time. We do not speak of the yield or income from an orchard or the service of a carpenter at 1 P. M. of a certain date. An orchard yields so many maunds of mangoes per year, a carpenter prepares a chair per day etc. Wealth is a fund, it is measured as of a certain instant in time. Income is a flow, it is measured as of a certain period in time. Therefore the (2 second fundamental fact about income is the element of time. Income always in reference with a certain period of time. For

example, if we say that the income of a particular person is rupees one hundred it will mean nothing. We will have to say whether it is per year or per month, or per day.

(3) Thirdly by income we mean the gain, benefit, or satisfaction which one derives and not necessarily the money he gets. As we are living in the age of money economy and the value of everything is measured in the terms of money, the income is usually expressed in the terms of rupees, annas and pies. But if we get our income in some other form, it will also be treated as income.

There is another question which has to be answered in connection with income. Should the services which a man renders to himself and the services which his friends and family members render to him be treated as part of his income. For example he shaves himself, his wife cooks food and renders other services to him. Should they be treated as part of his income. On principle if the basis of these services is not economic gain and they are rendered out of love they cannot be included in his income. But if the main idea is to save expenditure they can be treated as part of his income. In practical life it is difficult to ascertain the basis of these services. Usually both the motives economic and love direct his activities, and in many cases the idea of doing work for himself and not to depend on others also is predominant. While considering about such services we will be guided by the motive behind them. If the motive is economic they will be included in the income of an individual and if the motive is other than economic they will be excluded from the income of an individual.

National Income.—By 'national income' or 'national dividend' we mean the net income of a country or in other terms the labour and capital of a country acting on its natural resources, produces annually a certain net aggregate of commodities, material and non-material including services of all kinds. This annual net production of wealth is known as national income or national dividend. Readers should note the word net wealth which means the cost of producing that wealth has to be deducted and then alone the national dividend of a country can be estimated.

Property.—Every article of wealth is owned by some body. This relation between the wealth and its owner is called ownership, property right or property. Property is the technical term generally used in Economics to express this relation. It is defined as the right to income that is "the rights to benefits or service of wealth or free persons". For example the owner of a house has exclusive right of using it or receiving a rent from

a tenant if he rents it out to him. In the same way if a cinema company enters into contract with an actor to work exclusively for the company for 5 years for a certain payment, the company has thereby a property right, the right to receive certain services from the actor.

Value.—Wealth is measured in the terms of Value or price and therefore both these terms need special consideration. Value is the most fundamental concept of Economics and will be studied in details in a separate chapter. Here we will study the definition of Value. In Economics Value is used in the sense of Value in exchange " that is, how much of other articles of wealth can be secured in exchange of a particular article of wealth. In other terms value of a thing is its power of purchasing or getting in exchange other things. An example will make it clear. If in exchange of a horse we can get five cows or twenty sheep then the value of a horse in the terms of cows shall be five cows and in the terms of sheep twenty sheep. On the contrary the value of 5 cows in the terms of horse shall be one horse. Thus the value of anything can be expressed in other things and the quantity of other thing which that particular thing can secure in exchange will be its value.

Because value is closely connected with exchange it is necessary to define exchange also. "An exchange is a pair of voluntary transfers between two owners, when each transfer is made in consideration of the other." Thus a gift is not an exchange since there is only one transfer or in other terms "no consideration has been paid". For example if Mr A gives a gift of his house to a girls' school or to his brother it is not an exchange. But if he transfers the ownership of his house to Mr. B for a sum of rupees ten thousand then an exchange has been effected.

Once the reader grasps the true significance of the term 'exchange' it will be easier to understand the meaning of 'value'. As the term is employed in economics, "*the value of anything is the quantity of any other thing that would be given in exchange for the first thing.*"

Price.—The price of anything is the amount of money that would be given in exchange for one unit of it. If a maund of rice will sell for 20 rupees the price of rice is twenty rupees per maund. Value and price are distinguished from each other in that (1) value may be expressed in the terms of any kind of wealth, property or service, while the price of anything is expressed only in money and (2) the term value is used for any unit of a good whereas price relates specifically to one

By finding out the price of different goods we can also ascertain their relative exchange values. For example, if we purchase four seers of wheat for one rupee, two seers of rice for one rupee, and four chantaks of ghee for one rupee, then the value of 4 seers of wheat, 2 seers of rice, and 4 ch. of ghee is equal. To take another example if the price of a cow is Rs. 100 and the price of a sheep is Rs. 10 we can say that the value of a cow is ten times as much as that of a sheep or the value of one cow is ten sheep.

If one has thoroughly understood the true meaning of the terms 'value' and 'price' it will not be difficult for him to understand that the value of all goods cannot rise or fall together, or in other words there cannot be a general rise or fall in values. But the price of those goods can rise or fall together, or in other words there can be a general rise or fall in prices. For example if the exchange value of a cow falls from ten sheep to five sheep it means that the value of sheep has gone up by double in terms of cows. The reason is obvious, value is relative and therefore if the value of cow in terms of sheep falls the value of sheep in terms of cow must rise. Both cannot fall or rise together. But the price of things can fall or rise together, because price does not express the relation of any two commodities but expresses the relation of a commodity with a third thing called money. Thus it is quite possible that the prices of all commodities may rise together as happen during war period or they may fall as happen in the times of trade depression. If the price of all things rise this means that their value in terms of money has gone up, i.e., the value of money in terms of commodities has gone down. The above discussion fully explains why "all prices may rise or fall together but all values cannot rise or fall together."

Value and utility.—At this stage it is necessary to distinguish between value and utility. While nothing can possess value unless it has utility but the two terms are not the same. Value is a relative notion and implies a comparison between two or more objects and expresses a relation between them while utility does not imply any such comparison. Moreover value implies scarcity i.e., insufficiency of quantity in relation to demand. This is why free goods like air, sunshine, and rainfall though have tremendous utility yet they do not possess any value since they are available in unlimited quantities. On the other hand, gold being scarce commands a very high value in exchange.

Wealth and Social-Welfare.—Man by nature wants to be happy, and all his activities are directed towards the attainment of this object. If man makes an effort and produces wealth it is

because he has wants to satisfy and if they remain unsatisfied he will feel the pang. But wants can only be satisfied by wealth and hence man makes an effort to produce it. Thus the object of producing wealth also, is to secure happiness. But we should not forget that man is a social being and lives in a society, and therefore his life is vitally influenced by the social conditions. Thus the happiness of a member of the society is dependent on the happiness of the society. If the society in which man lives is not happy and prosperous, he also cannot be happy and prosperous. It is possible that by exploiting the society a group or a class of people may live the life of happiness and prosperity for some time. Their very basis of prosperity and happiness may be the exploitation of society. But this happiness and prosperity of theirs will be short-lived and temporary. Their exploitation will set the whole society in revolt against them and their prosperity will come to an end. For instance, the present day society has begun to revolt against capitalists. In other words, it can be said that the interests of an individual and the society cannot be separated, they are one. Therefore it is the duty of every individual not only to consider personal interests while producing wealth, but to keep in his mind the wider interests of the society as well. Now we will study the relation which exists between wealth and social welfare.

There is no doubt that with the increase in the production of wealth in a country or society its prosperity will also increase. But increase in the production of wealth only, is not enough in the interests of the society, nor it brings about prosperity to the whole society. In the interests of the society certain other considerations regarding wealth production should not be ignored.

In the first place the most important problem which attracts our attention is the distribution of wealth. It is in the interests of the society that the distribution of wealth should be as far as possible equal and fair. If there is great disparity in wealth distribution a few persons or a small group of persons may become very rich but the large section of population will live a poor and miserable life. An example will make it more clear. If in a country the annual total net wealth production is 500 crores of rupees and there are one crore people in that country and we assume that the wealth distribution is unequal so that 66 p. c of the wealth produced is pocketed by 5 p. c. people in the country and the rest 34 p. c. is distributed among the remaining 95 p. c. of population. In such a case there will be a great concentration of wealth with a very small class of people while the large mass of population will live a life of poverty. This state of affairs certainly is against the society. Thus the interests of the whole

society demand that the distribution of wealth as far as possible should be equitable.

In the second place we should consider the relative increase in the wealth production and the population of a country. If the production of wealth in a country is on the increase but the population of the country is increasing at a faster rate than wealth production, it will not be sufficient to maintain the prosperity of the country. Thus only an increase in the wealth production is not enough, but the percentage increase in the wealth produced should be greater than the percentage increase in the population of a country. Then only the prosperity of the society can be enhanced.

Besides these two, there is a third point to be considered *i.e.*, the method of producing wealth. In other words the method of production should not be such which may mean great hardship, and unbearable strain on those who are engaged in producing wealth. For example, it is in the best interests of the society that the hours of work in the factories should not be so long that there may not be sufficient leisure for the workers. Similarly the women labourers or children should not be made to work for long so that their health may not deteriorate. Children below a certain age should not be allowed to work at all. And women should also be protected from over-work. The conditions of work should also not be inferior, otherwise the health of the workers is bound to suffer. It is not in the interests of a society or country to produce more wealth by over working her population or by forcing people to work under unsatisfactory conditions.

The above discussion clearly shows that there is a close relation between wealth and social-welfare. If the distribution of wealth in the society is fair and equitable, production of wealth is greater than the increase in population, and the production of wealth is carried on under satisfactory conditions, in that case the society will be happy and prosperous. But if the above conditions do not exist, mere increase in wealth production will not make the society happy and prosperous.

PART II

CONSUMPTION

CHAPTER IV

Wants

Wants.—Every human being is full of desires. To take a simple case, every one of us desires to get good delicious food to eat, decent clothes to put on, a beautiful bungalow to live in. We also desire and like to enjoy the beauty of Himalayan forests, we like to walk on foot among beautiful surroundings of a garden, and to sit in moon-night by a river bank. We also try to satisfy these cravings and desires as far as possible. But if we minutely study we can notice that these desires can be divided into two classes: (1) There are those desires which require economic goods or wealth for their satisfaction: (2) There are other desires which do not require wealth to satisfy them. The desires of food, clothing, and a home belong to the first group and in economics they are known as "Wants." The other group consists of such desires like that of observing natural beauty, and enjoying the moon at night. To satisfy these and such other desires one does not need any wealth. If one likes to walk on foot, or likes to sit near a river bank or desires to be honest and religious he can satisfy these cravings or desires. No wealth is needed. Thus in economics we use the term 'Wants' to express those desires only which can be satisfied by wealth. And the use of wealth to satisfy wants is known as 'Consumption'.

Since 'Consumption' is the satisfaction of human wants, it is necessary to know the source of their origin. The major portion of man's activities are directed towards the development of ways and means for the satisfaction of these wants. These wants spring from one of the four sources. Firstly, they spring from the desires for minimum of goods that are necessary for existence. Secondly, they come out of the desire to maintain the group or class standard of living. Thirdly, they arise out of the craving for distinction and excellence. Fourthly, they may arise from the altruistic or aesthetic motives.

Characteristics of wants.—In the first place we notice that wants in general are insatiable, they can never be satisfied, they are unlimited. There is no limit to wants. From the beginning of the life to the end wants surround the man and he can never boast of having satisfied all his wants. A particular want can of course be satisfied, but as soon as that particular want is satisfied another takes its place and man begins to 'the urge of satisfying this new want. This chain of

wants never ends, they go on multiplying indefinitely. It is common experience that if a man is very hungry and takes his meals at a hotel so that his want of hunger has been satisfied he begins to feel the want of smoking and once he satisfies that want, a third one perhaps of seeing a picture takes its place. Thus, there is a never-ending chain of wants. In brief we can say that the first characteristic of wants is that "in general they are insatiable or illimitable, but a particular want can be satisfied."

(2) In the second place "wants are competitive." If a man is hungry his want of food may be satisfied by breads, fruits rice, milk or any other food. Thus the wants of bread, milk, fruits, and rice compete with each other. Similarly if a man wants entertainment he can go to a cinema show, he can read short stories of a fiction, or he may go to a concert. It is clear therefore that these wants compete with each other. The man in question will think for sometime whether he should go to cinema, or to concert, or read a fiction and ultimately he will make the decision:

(3) "Wants are also complementary." The consumption of one thing for the satisfaction of one want involves the consumption of other goods as well. For example, if we want to drink tea we will have to purchase not only tea but sugar and milk as well. Similarly the want of paper gives rise to that of pen and ink, the want of a car gives rise to petrol and the want of gramophone is directly associated with that of records.

Classification of wants.—While studying the characteristics of wants we have noted that they are unlimited and never-ending. But at the same time all wants are not equally important and urgent. Everybody has to constantly choose more urgent wants to be satisfied and to leave those which are less urgent for some future date. It is every day experience of every one of us that we satisfy those wants first which are more important than others. For example, if an average man has to choose between the want of food and the want of soap, he will very naturally prefer to satisfy the want of food first and leave the want of soap unsatisfied for the present. Similarly a man will think it more urgent to provide nutritious food to his children rather than supply them cycles to ride. Thus it is clear that wants are not equally important. Based on their relative importance the wants have been classified into three classes, (1) Necessaries, (2) comforts and (3) luxuries.

Necessaries — Necessaries are generally further classified into :—(1) Necessaries for existence or Necessaries for life, Necessaries for efficiency and (3) Conventional Necessaries

Necessaries for life.—By necessities for life we mean those goods which are absolutely necessary for the subsistence of the man. Or in other words, without satisfying those wants the body and soul cannot be held together. If anybody is not in a position to satisfy these most primary wants he is sure to die. Ordinary food, rough clothing to protect the body from excessive cold and a house for living can be placed in this class. But here as well one cannot be very dogmatic. It is difficult to say that only these and no more wants should be included in Necessaries for existence. For example, medicine may also be included in it by some. Moreover what type of food should be considered necessary for life may also be a matter of opinion. A certain kind of food, clothing and shelter may enable a man to live for long, say 100 years, and very inferior food, clothing and shelter may reduce the length of life to 50 years only. Thus it is difficult to say what should be considered necessities for existence. One should not forget that more nutritive food, better clothing and a well ventilated house will not only enhance the longevity of life but will also increase the working capacity of man. Thus we are drifted towards the "Necessaries for efficiency"

Necessaries for efficiency.—By necessities for efficiency we mean such goods which enhance the efficiency of the consumer to a greater extent than the increased expenditure involved in satisfying these wants. It follows therefore that a man should not economise on necessities for efficiency because if he cuts short these wants his efficiency will diminish to a much greater extent than the economy in expenditure. This is a false economy which should never be practised because with the decline in efficiency the income of the consumer will decline to a much greater extent. It is very difficult to say which wants should be included in the category of "necessaries for efficiency" as they are bound to be different with different persons, living at different places and in different times. For example, sufficient warm clothing may be necessary for efficiency in those parts where cold is severe or for a brain worker (teacher) sufficient milk and such other food may be considered necessary for efficiency; while in the case of a factory hand who mostly does work which involves no brain work but tremendous physical strain, sufficient wheat flour, vegetables, pulse and oil etc. may be considered necessities for efficiency. In deciding whether a particular want should be classified as necessary for efficiency or not we will also have to take into consideration the expenditure involved in satisfying those wants. Because there are many wants the satisfaction of which does not result in the enhancement of efficiency but the price paid may be much higher and the expenditure involved may be such greater in

proportion to the enhancement of the efficiency of consumer. For example, if a poor Indian labourer spends a certain portion of his wage on milk and fruits they cannot be treated as necessary for enhancing the labourer's efficiency because the amount of money spent will be out of proportion to the enhancement of his efficiency and the labourer's wage will not go high to that extent

Conventional necessities.—Every one of us spends money on certain items which are neither necessary for life nor for efficiency but all the same we have to incur that expenditure because it is dictated by social convention. For example, we in India have to spend large amounts on caste dinners, marriage, funeral, and religious ceremonies. It is not only in India that such expenditure is incurred, it is common in all the countries and with all classes of people. These necessary expenses are known as "conventional necessities" in Economics because they are based on social convention, and prevalent usage.

Comforts.—They stand midway between conventional necessities and luxuries. They consist of those things in life which increase the efficiency of a person, but the value of increase in the efficiency is generally less than their cost. The dividing line between comforts and luxuries is however not very clear. Whether a thing is a comfort or luxury depends on how well off a man is and what particular class of society he belongs to. To a poor labourer butter and ghee are luxuries To the middle class man, on the other hand, they are comforts, if not necessities. All such goods which will make the life comfortable are included in comforts. For example, many varieties of delicious food, decent clothes, a spacious and decent house, and the means of recreation and entertainment are included among comforts. However in deciding whether a particular commodity should be classed as comfort or luxury we will have to take into consideration the economic conditions of the consumer and his requirements. The price of the commodity in question will also have to be taken into consideration while deciding this question.

Luxuries are those things, the consumption of which satisfies a superfluous want. Their consumption does not increase, but in many cases decreases the efficiency of a person. Every one of us is aware that highly luxurious life makes the man idle, and reduces his mental and physical capacity. Whether luxuries do harm to a man may be a matter of opinion but this much is certain that they do not increase the working capacity of a man in the least. Too much of recreation, use of very costly clothes, furniture, article of decoration, pomp and show are included in luxuries. But here as well we will ha,

take into consideration the economic condition of the man and his class in the society in determining whether a thing is comfort or luxury. The articles of luxury will be different for different persons.

The above discussion about the classification of wants brings out one fundamental fact that the distinction between necessities, comforts, and luxuries is not easy to draw. Some people make the distinction on ethical basis, i.e., necessities consist of those things which are conducive to a life of plain living and high thinking, while luxuries bring about man's degradation. But this point of view is no more accepted by the westerners. Even in India—the home of simple living and high thinking—the notion that it is sinful to enjoy life is fast losing ground.

There are certain writers of Economics who have tried to classify wants on a different basis. According to these writers any thing which adds to efficiency if it is included in consumption and reduces efficiency if it is excluded from consumption should be treated as necessity. All those goods which do not add to the efficiency of the consumer if they are included in consumption but if they exclude from consumption they reduce the efficiency of the consumer are comforts. And goods which neither add to the efficiency if they are included in consumption nor they reduce the efficiency if they are excluded from consumption are luxuries. This classification is not so scientific as given in the beginning.

However, one thing is clear beyond doubt that no hard and fast rule can be applied in classifying wants into necessities, comforts and luxuries. In every case we will have to take into consideration the economic condition and social status of the man concerned. These factors are of such a great importance in classifying wants that they need greater attention.

It has been repeatedly stressed in the above discussion that in dividing the line between necessities, comforts, and luxuries we will have to take into consideration how well-off a man is. Any thing which is necessary for a very rich man, may be comfort for a middle class man, and luxury for a very poor man. For example, good delicious and variety of dishes may be a necessity for rich, comfort for a middle class man, and luxury for poor persons.

The second factor which is closely connected with the economic condition of the man is his standard of living. Once a man gets accustomed to a certain standard of living it becomes to a certain extent imperative for him to maintain it. For example, a man enjoyed a fairly high standard of living so that he has been in the habit of taking milk and ghee regularly

and later on if he becomes poorer even then milk and ghee will remain necessities for him. Though to persons of his means milk and ghee may be comfort to him they will remain as necessities, because their exclusion from his consumption will mean a great discomfort and uneasiness for him so that his efficiency will diminish to a much greater extent.

Just as the standard of living affects the consumption of a man similarly if a man is addicted to wine or is a habitual consumer of a certain article it becomes a necessity for him. From an average poor man's point of view wine is mere luxury but if a man is addicted to it so much that he cannot do without it, wine will be a necessity for him. In such cases the economic condition of the man is immaterial. To illustrate the point further if we take two persons having the same income but having different tastes about reading the books, for one who has a great liking for books they are a necessity while for the other they are comforts or luxury.

Besides these considerations we have also to keep in mind the time and place in making the classification. For example, in cold countries warm clothing is a necessity while in warm countries it will not be considered necessary. Similarly in Bengal rice is a necessity while in Rajputana it will be classed as comfort or in certain cases luxury. Time is also a great factor which brings about change in the classification of wants. For instance, many of those commodities which were considered comfort or luxury hundred years back are now treated as necessities. A simple illustration will make it clear. Electric light formerly was considered as comfort or luxury but these days it has become a necessity for most of the middle class families in urban centres. To take another example, fruits are classed under comfort or luxury by the middle class people in India but if somebody is ill and the doctor has suggested fruits for his diet fruits will be necessary for his very existence.

Finally the occupation of the man concerned is also to be taken into consideration while making the classification. For example, motor car for a very busy doctor is a necessity, for a lawyer of the same status it is a comfort and for a big zamindar it is luxury. For a very busy doctor a motor car is a necessity because it will enable him to visit more patients and thereby increase his daily income. Similarly a man doing mostly highly intellectual work milk, butter, fruits, and vegetable is a necessity while for those who perform manual work they will not be considered as necessary.

The above discussion makes it clear that the same commodity may be a necessity, comfort, or luxury for different persons in different conditions. It is because the consumption

of a man is greatly influenced by his economic condition, habite, social customs, and his occupation etc. And these factors determine the importance of every commodity for different persons

The classification of wants into necessities, comforts, and luxuries, however, does not mean that consumption will follow the same order always. The only thing which can be said with a certain amount of definiteness regarding the order of consumption is that necessities for life will have the first preference. After satisfying the necessities for life what will be the order of consumption nobody can tell. The consumption of man is determined to a very great extent by the customs and practices of the society he lives in and by the fashion current in the society. Therefore often persons are directed by these influences in their consumption and it is difficult to lay any order of consumption.

It is common experience that factory labourers, and other workers spend money on cinema pictures though they forego certain necessities for efficiency like nutritious food etc. because they are so fond of pictures. In fact they are the best customers of cinema houses. If they are addicted to wine or tobacco, pan and betel-nut, they will spend money for satisfying these wants even at the cost of better food which is necessary for their efficiency. Students are found spending lavishly on their new suits and other fashionable articles even at the cost of milk, ghee, fresh fruits, and books which are necessary for them. Similarly there are persons who are extravagant and forget that they have to lay by some money for their rainy day. The above discussion makes it perfectly clear that there is no definite rule which controls men in deciding the order in which they will satisfy their wants. This depends upon the habit, likeness and whim of the man concerned. But one thing is absolutely certain that everybody satisfies first those wants which are necessary for existence or for life.

Wants and human welfare.—The end of all economic activity is to provide mankind with the means of a happy and comfortable life.

But wants are insatiable and unlimited, they are never-ending and therefore the question arises whether wants should be curtailed or they should be allowed to have a free play. At this stage we must consider whether constant multiplication and increase of wants brings about human happiness or otherwise. As we have noted above there are two schools of thought; one exalted the curtailment of wants and the other believed in ^{ment} of life by satisfying more and more wants. Indian ^{tion} and culture has all along emphasised that in order

to be happy in life one should curtail his wants and keep control over them. To the Indian thinkers indulgence in luxury and leading a very easy and comfortable life leads to unhappiness and degradation and therefore they all along warned people not to indulge in luxuries. Even at present Mahatma Gandhi is a great exponent of this school. He has curtailed his wants to the minimum, and wants his followers to live a simple life devoid of luxuries. But the modern society has out-grown this puritanic ideal, and the so-called modern civilized man believes in enjoying the life to the fullest extent and does not believe in curtailing the wants and live a hard life. The people of the later school believe that the increase in wants is the sign of growing civilization. The puritanic notion that it is sinful to enjoy life is losing ground and people have begun to recognise that it is perfectly legitimate to enjoy all the comforts and luxuries which the earthly life is capable of yielding.

In fairness it must be said that those who believed in the puritanic ideal of simple living and curtailment of wants never advocated the curtailment of necessities for efficiency. They fully realised that a certain standard of living was necessary for fuller intellectual and physical development of the man and that standard should be attained. What they objected to was useless multiplication of wants which mostly arose from the lust for luxurious life.

Even the modern writers do not seem to believe that the multiplication of useless wants is a sign of growing civilization. What they advocate is a high standard of living and not a highly expensive standard of living. There is a difference between expensive standard of living and high standard of living. The first might include such things which are undesirable both from physical and moral point of view, and are bound to diminish the efficiency of man. Thus the modern society believes in aiming at as high a standard of living as can be secured. High standard of living is bound to result in greater efficiency of the consumer, but the multiplication of undesirable and useless wants may diminish the efficiency. The multiplication of higher types of wants can never be harmful to the society. Therefore there is nothing wrong in a person aiming at a high standard of living. In fact a high standard of living will make him exert strenuously to attain this standard. Such purposeful activity can in itself be a great source of enjoyment, and a country whose inhabitants have this ambition is likely to be wealthier and more progressive than any other where the people are content with too little and are therefore inert and lazy. Increase of wants is far from being an evil, it is indeed the first condition of economic progress. But all the

same we must not forget that true human welfare depends on the nature of wants that may arise. The wants should be of a higher type so as to make their satisfaction a means of raising mankind higher and higher in the scale of civilization. As people become more enlightened and as the moral and aesthetic sense of people become more and more refined, they will learn to desire things which will enrich and beautify, and avoid those which degrade the man.

In India there is a great need of teaching the masses that they should feel the want of more and better things—so that they will make greater effort to obtain them. It is only by creating an urge among the masses for raising their standard of living that they can be made to work hard for producing more wealth. Thus only India can become economically prosperous and rich.

Standard of living.—We have already seen that the three-fold classification of human consumption into necessities, comforts, and luxuries, varies according to the individual consumer, time and place. But a science cannot afford to deal with separate individuals and as individual consumers often represent a type of consumption standard which is more or less homogeneous in a particular class of people, the science of Economics therefore studies groups instead of individuals. Thus the community is divided into groups, and the standard of consumption for each group is studied as at a given time and place. Therefore we can define *standard of living as the aggregate of necessities, comforts, and luxuries to which a class of people are habitually accustomed*. When wants are repeatedly satisfied over a long period of time they become habits and form the standard of living of the individual and of the class to which he belongs. For instance if an individual has been in the habit of enjoying better kind of food including sufficient milk, ghee, fresh and dry fruits, decent house to live in and sufficient clothes to wear, from his early childhood they will form his standard of living. The standard of living is not formed in a day, the habitual and customary enjoyment of certain commodities only shall make them a part of ones standard of living.

There are a large number of classes in the societies having different standards of living. From the rich who enjoys a very high standard of living down to the poor who just manages to satisfy his bare necessities of life there are a large number of classes having different standards of living. Each class looks upon certain things as constituting the normal requirements of its every day life. Each class makes efforts to attain its particular standard, and having attained it to keep it up and if possible to raise it. Every individual strives to maintain his

usual standard of living and if possible to raise it. Nobody likes to go down to a lower standard of living, because it is always painful to go without satisfying the wants which one has been accustomed to satisfy. Moreover the standard of living also determines the social status of the man and if perchance due to lowering down of income he has to lower down his standard of living he is looked down upon in the society and is forced to join a lower class. This degradation of social status is even more painful to man and therefore every individual makes his best efforts to maintain his particular standard of living and if possible to raise it. The standard of living is not rigidly fixed so that it will never change. It does change. It varies not only from nation to nation, from class to class, from individual to individual, but also from one period to another, with the same individual, class, or nation. Different forces, such as financial circumstances, habit, education, imitation—deliberate and unintentional, and ambition, influence the standard of living. It is common experience that if the financial condition improves the standard of life also improves. It is also true in the case of nations. England the birth place of modern industrial system in the sixteenth and the seventeenth centuries was a poor country and the standard of living of the English people was extremely low. But with the growth of factories and rise of political power England became very rich and the standard of living of the English people rose very high. While in India the decline of cottage industries and the loss of independence resulted in extreme poverty of Indians. Education also improves the standard of living because the educated man on the average has more wants than an illiterate man. Fashion or imitation has also a great effect on the standard of living, because leaving aside necessities man goes by the current fashion in the society in deciding what things he should consume. In fact the standard of living of a class comprises the common habits of members with reference to spending.

The above discussion makes it clear that the standard of living is not rigidly fixed, it does change. Thus the present standard of living in Britain is much higher than in India. The average factory worker in Britain is accustomed to enjoy a certain type of food, clothing, housing recreation, etc. He enjoys good food, puts on better clothes, reads newspapers, drinks tea, enjoys his pipe and tobacco, and visits cinema a certain number of times in a month. This standard of living is very dear to him and it is his earnest desire to maintain it. This is why if the mill owners make any reduction in wages the labourers in an organised way resist such wage reduction by resorting to strikes. The desire to maintain his standard of living induces the British worker to enhance his efficiency to.

restrict the size of his family. Thus the standard of living has a far reaching influence upon the worker and has a great national significance.

As far as India is concerned there are no two opinions that the standard of living in India is extremely low. India is in the grip of poverty. A very large percentage of Indian population is ill fed, ill clothed, ill housed and is deprived of education and medical aid. In fact most Indians are forced to live a life which is very miserable and is not at all suitable for human beings. The majority of the rural population, and the labourers in urban centres live a horrible and wretched life, they get inadequate and poor quality of food, they do not possess any clothes to protect their body and their houses are not fit for human habitation. They know practically no comforts and luxuries except the luxury of extravagant expenditure on a few occasions in life—marriage and death ceremonies caste-dinners and other religious ceremonies—which they are bound to perform as they are dictated by the custom or religion. But during the greater part of their life they enjoy only barest necessities of life. This low standard of living can only be raised when India produces much more wealth than what she does at present by developing her agriculture and her industries.

CHAPTER V. CONSUMPTION AND UTILITY.

Consumption consists in the satisfaction of human wants. Human wants are the starting point of economic activity and consumption is the ultimate goal of all economic activities. With the growth in civilization, wants went on multiplying and accordingly man tried to produce more and more of wealth.

What is consumption.—But before we discuss more about consumption of wealth we should be clear about the meaning of the term 'consumption'. Scientists tell us that matter can never be destroyed, only its form can be changed. Therefore consumption cannot result in the destruction of the matter, it results only in the destruction of the utility of the thing consumed. It means that the utility of a thing is exhausted after it has been consumed. Consumption destroys utility but no matter. Thus when we eat food in order to satisfy our want for food we do not destroy it. It exists in our system in a changed form but its power of satisfying the want of hunger is exhausted. Similarly when we wear our clothes or live in our houses we are said to consume them scientifically that is their utility is gradually being exhausted. The worn out cloth still remains but its utility, that is, the power of protecting the body from cold has been lost. The weaver is as much a consumer when he uses yarn in weaving cloth. Thus it is clear that "the use of wealth for satisfying any human want is consumption". By use of wealth we mean the enjoyment of utility and not the destruction of matter. One thing should be remembered in this connection that the utility of a commodity can be exhausted at once, as in the case of eating grapes, or it may take a long period of time as in the case of a house. But in both the cases it is consumption all the same. It does not matter whether it takes a long period to destroy the utility or it is at once destroyed.

Some Economists divide the consumption into 'Final consumption' and 'productive consumption'. By Final consumption we mean that consumption which is carried on in order to satisfy human want directly. For instance when a man feels hunger and he eats food this is direct consumption. Productive consumption is that use of wealth which is carried on in order to produce further wealth for final consumption. For example yarn is used by the weaver in weaving cloth which is required for final consumption. Thus consumption of yarn by the weaver is known as 'Productive consumption.' Similarly all the machines, coal for generating steam in the boiler, raw material used in manufacturing,

certain article will be included in Productive Consumption. But this division of consumption into Final consumption and Productive Consumption does not necessitate any change in our definition of consumption, because consumption means in every case the use of wealth for satisfying a certain want. It does not matter what kind of want it is. The use of services—such as personal services of doctors, lawyers and domestic servants will also be included in consumption because they also satisfy human wants.

Importance of consumption. Until recently writers entirely neglected consumption, the early writers paid very little attention to this branch of Economics. But of late Economists have been paying greater attention to consumption.

Consumption is the goal of all production. If man could go without satisfying his wants or if wants could be satisfied without consuming wealth the whole economic life would have come to an end, because all economic efforts are directed towards procuring the wherewithal to satisfy wants. Wants are therefore the main-spring of all human activities.

Consumption is also important from the national point of view. It is not only enough to produce more wealth in order to make the nation prosperous, but it is also necessary that the consumption should be carried on in the interest of the country. The country where consumption is carried on with a view to utilise the natural resources of the country and all waste is avoided is sure to be more prosperous. This is why every progressive government makes laws to check the consumption of harmful goods and thereby the consumption of the nation is controlled. For example, the Chinese were great opium eaters. This bad habit was eating away the very vitality of the whole nation. This is why the national Government made opium eating a criminal offense. In India as well custom and tradition is responsible for much wasteful expenditure which should be controlled by the State. Thus it is clear that consumption is of great importance in the economic life of the society, though in the existing capitalistic system when production is carried on with profit motive the importance of consumption does not become so very clear.

It has been made clear that wants give rise to activities, but the reverse is also true in modern times. That is, the productive activity in many cases gives rise to new wants which did not exist before. In the early stages of society, the physical cravings supplied the motive to all human effort.

He would not take up any activity unless he was compelled by some physical want to make an effort. But as society advances, while the influence of wants in guiding

human efforts still remains, yet in many cases activities, often give rise to new wants. These days manufacturers conceive of a new article which they manufacture and then through constant propaganda a want for the said article is created among people. For example, when cycle, telephone or motor cars were invented, there did not exist any want for those goods, but after they were made popular, there did arise a great want for them. A very significant instance how a want is created among people is the propaganda made by the Tea-cess-committee to popularise tea among Indian masses. In modern times advertisement and other scientific methods of propaganda enable the producers to create new wants among people. Thus in these days producers do not produce goods because there is a known want for these goods, but in many cases goods are produced because producers are confident of creating a want for them.

The Law of Diminishing utility.—As we have noted before there is no limit to wants but a particular want is satiable. As we get more and more of a particular thing the intensity of want for that thing diminishes. This is every day experience of all of us, and the law of diminishing utility is based on the observation of this common fact. But here the reader should be reminded that by utility we mean the power of satisfying a human want and therefore the want and utility cannot be separated from each other. And with want man comes in so that the utility of a thing can only be found out when we know its power of satisfying the want of a particular man. Thus the utility of a thing depends upon the man whose want it satisfies. The same thing may have different utility for different persons and different units of the same thing may have different utility for the same persons. It follows therefore that if a man gets more and more of a certain thing for consumption the intensity of his desire for that thing tends to diminish. As intensity of want diminishes further units of that thing satisfy less intense want and hence the utility derived by the consumer from more units of that thing diminishes.

An illustration will make the point more clear. Let us take the case of a man who is very hungry ; to him the utility of the first and the second bread will be immense indeed because it will satisfy an extremely intense want. But after taking two or three breads the utility derived by the man from the fourth and the fifth bread will diminish and the utility will go on diminishing as he takes more and more breads, so much so that after taking ten breads he will derive no utility from the eleventh. In fact he will stop taking breads at this stage because for the time being his want of breads has been completely satisfied. Similarly our desire for possessing one

pair of shoes is very strong, but our desire for a second pair is bound to be less strong, a third pair will yield still less satisfaction, so that after adding a few more pairs of shoes further pairs will be mere encumbrance. These illustrations go to show that as we get more and more of a thing for consumption the utility we derive from the successive doses of that thing goes on diminishing. This is known as "The Law of Diminishing utility".

This tendency towards diminishing utilities from successive doses of the same commodity is operative in all cases of consumption. The rate of diminution may be slow for some commodities or rapid for others, but the tendency is always present and a point must come when further instalments of the commodity would yield no utility at all.

The Law of Diminishing utility holds good for all kinds of satisfaction but subject to the following qualifications :—

(1) Up to a point every addition may yield not decreasing but increasing satisfaction. Therefore the Law of Diminishing utility will only be applicable after a definite quantity had already been consumed. For illustrations sake we can take the case of a very thirsty man. To him an excessively small quantity of water say a few small drops will aggravate his craving for water and for some time every addition will be followed by increasing satisfaction. It is only after he has taken a certain minimum quantity of water that the satisfaction derived from additional quantity of water will begin to diminish. Therefore the Law of Diminishing utility assumes that a certain minimum quantity of the article is consumed, and the units are of suitable amounts. If we take the earlier doses to be very small the utility may rise at first instead of falling.

(2) It is also assumed that units are consumed continuously in rapid succession without losing time. If we take a certain period of time into consideration the consumer's habits or tastes may change in the meanwhile. For example if a thirsty man drinks glass after glass of water after taking a certain quantity his thirst will totally disappear for the time being. But it does not mean thereby that after a few hours he will not need any more water. Similarly the more a man drinks (wine), the greater is his thirst for additional drink. For as he gets drunk he is a changed man and his taste changes. Thus it is no exception. We must assume a period of time suitable for each occasion. But it is perfectly correct to say that at a given time the successive doses will yield diminishing satisfaction. Moreover if a longer interval is allowed for consumption there might occur a radical change in the man himself or fashion, and

custom might change. This is bound to have its affect on the utility derived from the successive doses.

(3) There are certain classes of commodities especially rare articles the utility of which does not diminish with every increase in the stock of those articles. For example if there is a very valuable rare historical book which is completed in two volumes and any how the first volume is procured the utility of the second one will not diminish but rather it will increase. In the same way the collector of curio articles or stamps may desire the additional units of those articles with greater intensity. But in fact this is no real limitation, if we take a complete set as a unit and not the part of it. For example, both the volumes of that rare book should be treated as one unit. In case more copies of the same book (2 volumes) are found to exist, in that case certainly the utility of the additional copies will diminish.

(4) In some cases, the utility of a commodity depends not only on the quantity possessed by the consumer but also on the quantity owned and possessed by others. For example, the utility of one set of telephone rises with the increasing use of telephones. Similarly the utility of a certain article increases when it comes in fashion. But if we take the case of the individual consumer the utility of an additional set of telephone will diminish for him all the same.

In spite of these limitations the tendency is more or less universal. This law is very important because it lies at the basis of the law of demand. The law of diminishing utility is best explained by the following diagram.

Units of satisfaction derived from successive oranges

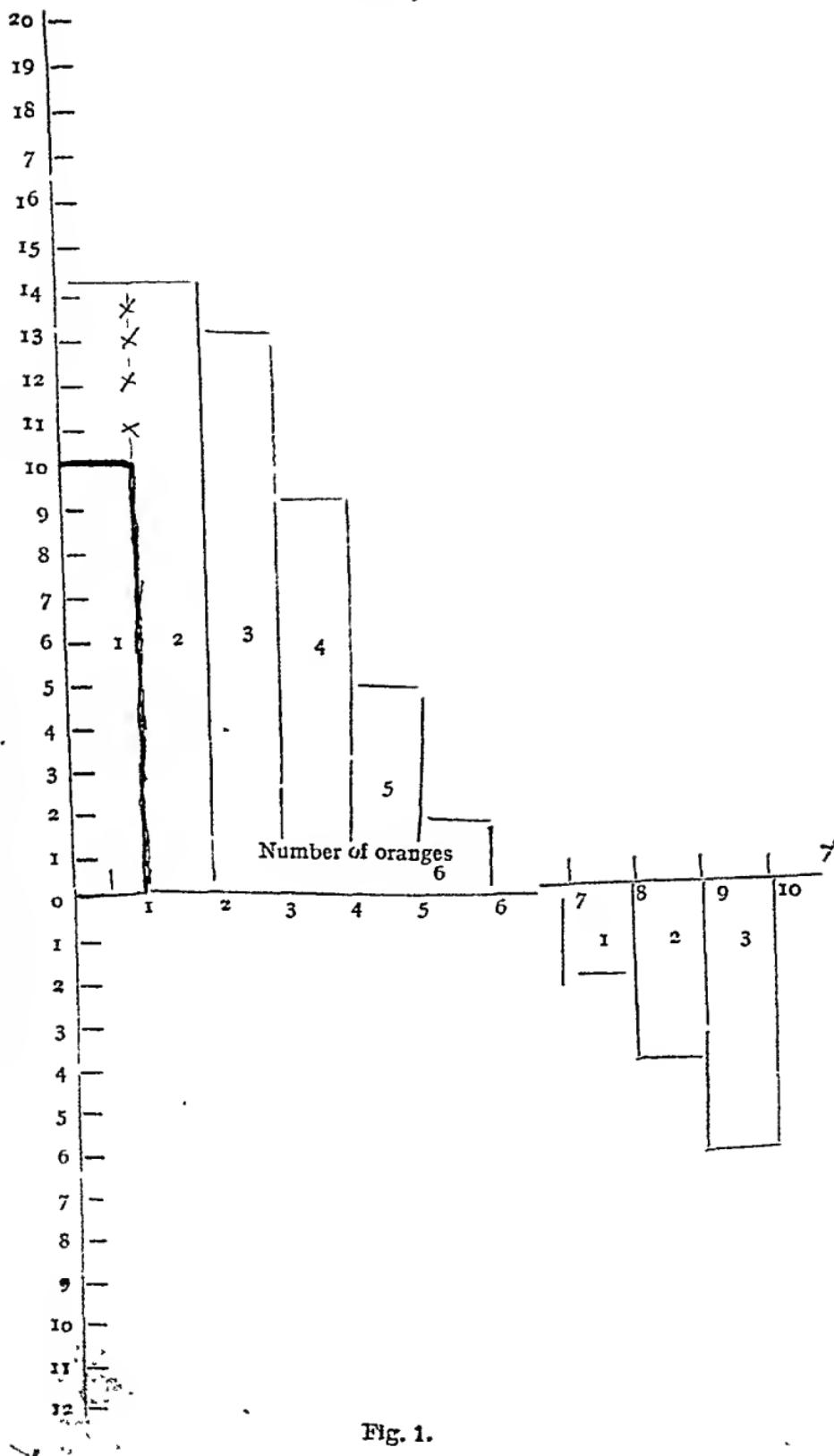


Fig. 1.

The equal divisions along the line OX represent the successive units of the commodity, that is, oranges consumed or purchased by a person ; on the other hand, equal divisions along the line OY represent equal units of satisfaction. Rectangle 1 represents the utility derived from the first orange. Rectangle 2 represents the utility derived from the second orange and so on. Our diagram shows that in the initial stages the utility derived from the second orange increases rather than diminishes. But after consuming two oranges the additional oranges give less and less of utility so much so that the utility of the seventh orange becomes nil, which is on the border land of utility and disutility. Further consumption of eighth, ninth, and tenth oranges bring negative utility. Thus the first orange brings 10 units of utility, second 14 units, third 13 units, fourth 9 units, fifth 5 units, sixth 2 units and seventh nil. If the consumer persists on consuming more which he will not in ordinary course, he will derive disutility rather than utility. Thus the above diagram clearly explains that the utility of additional units diminishes.

Marginal utility.—We have already noted that with the increase in the supply of a certain commodity the utility derived from that commodity diminishes for the consumer. And a stage is reached when the consumer no more wants to add that commodity to his consumption because after that stage has been reached the utility derived from an additional unit of the commodity may be less than the utility sacrificed in the form of payment of price. To make the point more clear, let us assume that each unit of satisfaction to the consumer is represented by 6 pies. Then if the price of an orange were one anna, the consumer would just be induced to purchase the sixth orange. Its utility, two units, will be the marginal utility because it will just balance the utility of the price paid i.e., one anna. When the consumer is confronted with the problem of purchasing sixth orange he will be in doubt as regards the advisability of purchasing it because he will have to sacrifice equal utility in the form of price. He will not enjoy any surplus utility by purchasing the sixth orange. In no case he will go in for the seventh because thereby he will incur a loss in utility. Therefore in short we can say that marginal utility is derived from the last unit of a commodity consumed by a person. It is termed marginal utility because at that stage the consumer is on the margin of doubt whether he should go in for more or not.

Total utility and marginal utility.—Total utility is the sum total of utilities of all the units purchased and consumed by a man, while marginal utility means the utility attaching to a particular portion of it, that is, the unit which is consumed last.

The total utility of a stock is obtained by adding up the utilities of all the units concerned. Thus in the above diagram (Fig. 1) the total utility or satisfaction by consuming six oranges is $10 + 14 + 13 + 9 + 5 + 2 = 53$ units. The total utility of a stock of commodity increases with the addition of every unit but it increases at a diminishing rate. When the utility derived from the additional unit becomes zero total utility ceases to increase and thereafter it falls. To make it more clear, let us take the figure 1 again. Upto sixth orange the total utility increases though at a diminishing rate. If we add to our consumption seventh orange the total utility remains just the same i.e., 53 unit because the seventh orange does not give us any satisfaction, its utility is zero. And if eighth orange is added to the consumption the total utility will be (53 - 2 - 51 units) less. But in practical life such a stage never arises because we have to pay a price for anything we purchase. Therefore nobody will increase his consumption of any commodity to such an extent that the utility derived from the last unit of that commodity might be nil because the consumer will have to pay the price of that unit from which he derives no utility. Of course in the case of free goods the consumption can be pushed forward to the extent where the utility derived from the last unit of that free good may be nil because in that case no price will have to be paid.

The *marginal utility* means the addition made to the total utility by the last unit of commodity consumed. Thus in the above illustration if the consumer thinks it just worth while to buy the sixth orange the utility of the sixth orange i.e., 2 units is called the marginal utility. At this point the consumer is on the margin of doubt as to whether it would be worth while to consume any more of that commodity or whether he would get greater utility by consuming something else. However, one should not forget that marginal utility is not fixed and unalterable. The number of units depends upon the price. If price falls, more will be consumed and if price rises less will be consumed. For example, if the price of oranges rises to two and half annas per orange our supposed consumer will only consume five oranges because to him the satisfaction obtained by the fifth orange will be just equal to the sacrifice made. The quantity consumed also depends upon the intensity of demand. A man may come to desire a thing more or less intensely, and therefore he will require more or less of it than before, even though the price may remain the same. For illustrations sake we suppose that our consumer has fallen ill and the doctor has prescribed him oranges, then at one anna per orange he will buy more oranges than before because the demand for oranges is more intense than before and hence the satisfaction

obtained by the successive oranges is also much greater than before. Now suppose our consumer purchases ten oranges, at one anna each. In this case the utility derived from the tenth orange will be the marginal utility. Thus it is clear that since the quantity of a commodity consumed is variable, the marginal utility is also variable. But whatever may be the quantity consumed the last unit consumed at a given time gives the marginal utility.

Another point which should be carefully noted in this connection is that utility of each unit of the stock is the same and is equal to the marginal utility. Let us take our familiar example of oranges. It must not be forgotten that all the oranges are exactly of the same size and quality. Now suppose orange No. 1 is lost. In that case the five remaining oranges will yield utilities as shown in the diagram. The first orange consumed (No. 2) will yield utility 10, the second one (No. 3)—14, the third one (No. 4)—13, the fourth one (No. 5)—9, and the fifth one (No. 6)—5. If the sixth orange had been there the additional utility obtained would have been 2. Thus it is clear that out of the stock of six oranges if any one is lost, the loss of utility incurred will be 2 units only. Therefore the utility of every single one of these oranges is the utility of the marginal, *i.e.*, the sixth unit. If we go on consuming anything upto the point of complete satiety, its marginal utility will come down to zero.

The marginal utility of money.—Money is also subject to the Law of Diminishing utility. But the fall in the utility of money is very slow and the point where the marginal utility will sink down to zero is never reached. The reason is obvious. Money is not one commodity, but represents all the commodities it can purchase. As the income of a person increases the satisfaction or utility derived from additional income diminishes. Those who possess very large incomes have low marginal utility of money as compared with those who have small incomes. For example the marginal utility of a rupee to a person with Rs. 100 a month is much higher than to a person with Rs. 1000 a month, because in the former case the last rupee is spent on much more urgent wants than in the later case. Similarly the sacrifice of utility caused by equal reduction of income would be greater in the case of persons than in the case of rich persons. For example, take the case of a factory labourer getting Rs. 15 per month and that of a pleader getting Rs. 250 per month. If Rs. 5 is taken away from both the labourer and the pleader the sacrifice of utility in the case of the labourer will be considerable while in the case of the pleader it will be negligible in the case of the labourer loss of Rs. 5 per month.

the sacrifice of the necessities of life, while in the case of the pleader it will mean the sacrifice of less urgent wants.

Consumer's Surplus.—While studying the Law of Diminishing utility we have noticed that different units of a commodity yield different amounts of satisfaction or utility to the consumer, and as the supply of a commodity increases the utility of the commodity to the consumer diminishes. But we also know that the price of different units of the same commodity at a given time will be equal and it can never be higher than the marginal utility of the commodity because as we have noted above the utility of every unit in the given aggregate is the same and is equal to the marginal utility. Therefore the price we pay for a thing measures only the marginal utility and not the total utility. Thus the utility which the consumer parts with in the form of price in order to secure the desired commodity is less than the total utility which he obtains by consuming that commodity, since only on the marginal unit, which a man is just induced to buy, the price exactly measures the satisfaction or utility which he expects to get from that unit, while on other units which he buys, he enjoys some extra amount of satisfaction or utility. He would be willing to pay a higher price for these units rather than go without them, because they yield greater utility than the marginal unit. But as the price of every unit is the same and is equal to the marginal utility the consumer obtains extra utility without paying for it. The difference between the amount of satisfaction or utility a consumer obtains from purchasing things over the price that he pays for them is the economic measure of '*consumer's surplus*'. It represents the satisfaction that he would have lost, had he been deprived of the commodity. But one should not forget that consumer's surplus is related to the extra utility enjoyed without paying for it, and has nothing to do with the price itself, though the extra utility can be measured in terms of money just as the value of other commodities is measured in terms of money.

In order to make it clear let us take the same illustration of oranges. We know that the first orange gives us two units of utility second 14, third 13, fourth 9, fifth 5 and sixth 2. We also assume that we are ready to pay 6 pies for one unit of utility. Now the price of oranges prevailing in the market is one anna per orange and we purchase six oranges for six annas. In other words we have paid 12 units of utility for six oranges, since we have assumed that one unit of utility is equal to six pies. But in exchange we have obtained $10 + 14 + 13 + 9 + 5 + 2 = 53$ units of utility because the total utility of six oranges for us is 53 units. Thus it is clear that by purchasing six oranges for six annas we have obtained 41 units of utility

as ' consumer's surplus.' Marshall has defined consumer's surplus in the following words : ' The benefit which a person derives from purchasing at a low price things for which he would rather pay a high price than go without may be called ' consumers surplus '. The following diagram will make the consumer's surplus idea more clear.

Consumer's Surplus.

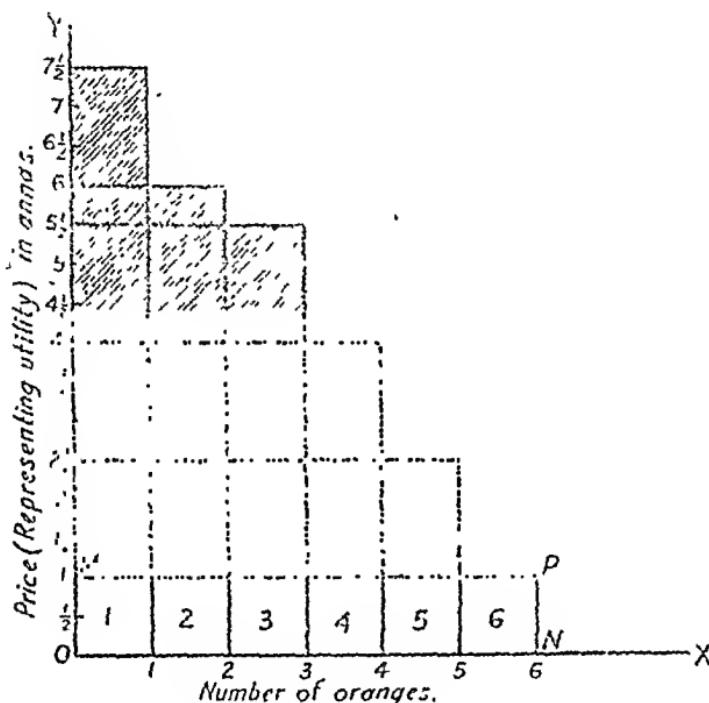


Fig. 2.

The horizontal axis OX represents the number of oranges and the perpendicular axis OY the price representing utility. According to the figure our purchaser would be willing to pay $7\frac{1}{2}$ annas for the first orange rather than go without it altogether $7\frac{1}{2}$ annas represents the total utility of the first orange and it is represented by rectangle 1. For the second orange he would be willing to pay six annas rather than go without it, for the third he would be willing to pay $5\frac{1}{2}$ annas, for the fourth $4\frac{1}{2}$ annas, for the fifth $2\frac{1}{2}$ annas and for the sixth he would be willing to pay only one anna. The total utility which he would obtain from oranges first, second, third, fourth, fifth, and sixth is represented in the diagram by rectangles 1, 2, 3, 4, 5, 6. Thus all the six rectangles represent the total utility of the six oranges. But our purchaser gets oranges at the rate of one

anna per orange and thus gets six oranges for six annas in all, which is represented by the rectangle O. M. P. N. the unshaded portion. The total surplus is represented in the diagram by the shaded portion. The unshaded area O. M. P. N. representing the total exchange value or price paid for the six oranges. The surplus satisfaction or utility in the case of each of the first five oranges is represented by the shaded portion of rectangles 1, 2, 3, 4, 5 respectively. Rectangle 6, which represents the utility of the sixth (marginal) orange has no shaded portion, since there is no surplus satisfaction or utility derived from it by our consumer.

The conception of consumer's surplus has been fully explained above, but one can easily think of illustrations from his daily life. For instance, before the second world war began in 1939 wheat was being sold at the rate of 12 to 13 seers a rupee and during the war wheat was purchased by most of us at 3 to $\frac{1}{4}$ seers per rupee. This shows that before war we were enjoying enough consumer's surplus when we purchased wheat at a low price. There are many commodities which a man gets at a low price but will be ready to pay a much higher price rather than go without them. Thus the conception of consumer's surplus is a real one and not imaginary.

But we must keep in mind certain limitations of the doctrine of consumer's surplus. It is quite true as a general conception and every one experiences it in his daily life. But it is difficult to accurately measure it in terms of money. In the first place the marginal utility of money to different people is different. A rupee has much greater utility to a poor man and little utility to a rich man. Therefore if a rich man pays high price for something in the beginning that may be purchased at a later date by poor persons at a very low price, say fruits at the beginning of their respective seasons when they are very expensive and when the season is in full swing they are very cheap) does not indicate a higher consumer's surplus to the rich, but rather a lower marginal utility of money to them. Similarly articles like diamonds which possess scarcity value are purchased because their possession bestows added prestige and glamour on the purchaser. If these articles become very cheap rich persons will not purchase them at all because in that case they will no more satisfy the love of distinction. Therefore it would be wrong to say that if such articles become cheap their purchasers will enjoy consumer's surplus. In such cases consumer's surplus seems to be unreal, since it would disappear if diamonds become abundant and cheap, for rich persons would cease to buy them. It is even more difficult to measure the consumer's surplus which one enjoys from necessities of

life. Since their utility is infinite. A person would be prepared to give away all his worldly possession in order to procure the necessities of life. Therefore we cannot really measure it. Moreover leaving aside the above mentioned difficulties in measuring the consumer's surplus, it is never possible precisely to measure consumer's surplus since we cannot accurately find out what price would be paid for different instalments of a particular commodity by the consumers rather than he would go without it. In practice nobody ever thinks on these lines while purchasing any article. Of course the total quantity purchased is certainly affected by the price. For instance if a person goes to the fruit market and purchases six oranges for six annas at the rate of one anna per orange, he himself does not know what potential price he would have paid for the first orange if there was only one orange in the market. The price which a man would pay for a particular unit or instalment of a commodity rather than go without it would depend upon the intensity of demand and the money available at the disposal of the purchaser. But the intensity of demand and the amount of money available differ with different persons and also with the same person at different times. In fact unless one pays a certain price for a certain commodity nobody can accurately say what potential price a man will pay for a certain commodity rather than he would go without it, and therefore it is not possible to ascertain the consumer's surplus. Though it cannot be measured in terms of money yet consumer's surplus is enjoyed and not at all imaginary or fictitious.

With all these defects the doctrine of consumer's surplus has great utility in practical life. The manufacturers and monopolists raise the price of their articles on the basis of consumer's surplus enjoyed by the consumers of that article. The Finance Minister takes into account the consumer's surplus while levying a new tax on a consumable article or raising the rate of an already existing tax. It also serves useful purpose in comparing the life at two places. If the residents of one place enjoy a greater amount of consumer's surplus than the other they will be more prosperous and well off than those living at the other place. Thus it can also be said that people enjoying a greater consumer's surplus are also more civilized and materially well off and advanced. Since people living in more civilised and developed regions will have a very large number of articles at their disposal to consume they will enjoy a greater amount of consumer's surplus. For example, a man having an income of Rs. 12,000 a year in Tibet is not so well off or in other terms he does not enjoy the same amount of consumer's surplus as a man with Rs. 12,000 a year in India.

The Law of Equi-marginal utility.—We have already noted that the wants of man are indefinite and unsatisfiable, there is no end to man's wants. But the means of man for satisfying those wants are limited and restricted. When the means to satisfy wants are limited and wants are unlimited the question naturally arises, which wants should be satisfied, and which should be left unsatisfied or how much money should be spent on different goods which one needs. If the goods which a man needs are available without paying for them, he will go on consuming them till the marginal utility of those goods sinks down to zero. But most of the commodities we require cost some effort to produce them and therefore have to be paid for. Similarly if a man is so very rich that the marginal utility of money to him is extremely little, then such a man can conceivably be in a position to carry the consumption of every single commodity to the point of complete satiety. But these are abnormal cases. There are very few commodities needed by average man which can be had without paying a price and there are very few such rich men in the society. Therefore for the vast majority of people it is a problem as to how he should spend the limited income at his disposal on the numerous goods (utilities) offered for sale in the market. One thing is certain, that every sensible consumer will like to obtain the maximum utility or satisfaction out of the money he spends. This object will only be achieved when a man will carry the consumption of each article upto a point, when he feels, that after that point the money he has still at his disposal will give more satisfaction if spent on something else. An illustration will make the point clear. Let us suppose that a person named A feels the want of clothes, books and travel at a time. He has to satisfy all the three wants to some extent, but the question is as to how he should distribute the money at his disposal on these three heads of expenditure. Let us assume that first of all he decides to spend money on clothes because the want of clothing is felt more urgently. But after a certain point he stops spending anymore money on clothing because he begins to feel that now if he purchases books he will obtain greater satisfaction or utility than by purchasing more of cloth. Similarly after a certain point is reached he will stop purchasing more books because he will begin to feel that he would derive greater utility by spending the remaining money on travelling than on more books. On travelling as well he will spend money upto the point where its marginal utility becomes equal to the marginal utility of cloth and books. In brief we can say that man in his consumption is mainly guided by the consideration of obtaining the maximum satisfaction from his income and in order to achieve it he compares at every stage the relative utilities to himself of different things, he passes on from one

commodity to another until the amount of money available at his disposal is exhausted. If on further consideration he feels that he would have gained greater satisfaction by spending less on one thing and more on another he regulates his expenditure accordingly. The ration consumer goes on substituting one thing for another until he feels that the marginal utility in every case is equal because only then he can obtain the maximum satisfaction out of the money spent on his expenditure.

In short we can say that the consumer can enjoy maximum satisfaction or utility from the money spent on different items of expenditure only when the marginal utility of every commodity purchased is the same or equal. This law which governs the conduct of an average rational man in his consumption is known as the 'Law of Equi-marginal utility' or the 'Law of Substitution'.

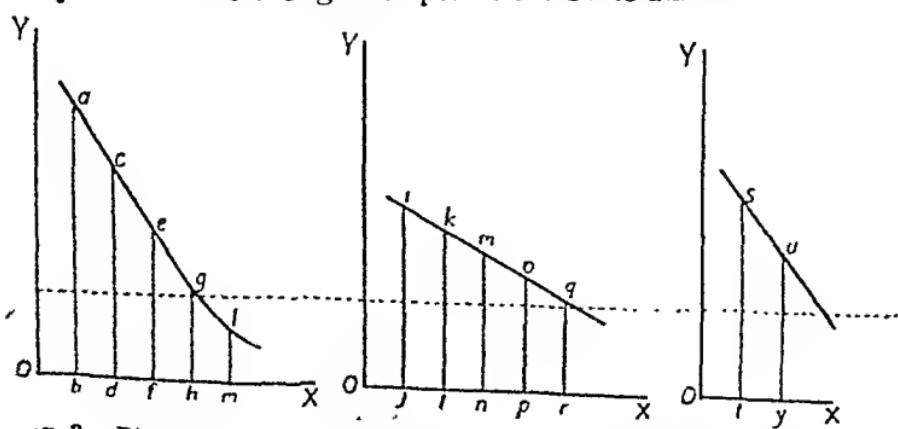
This law can be better explained by means of a table. For the sake of illustrating the law we assume that a man needs milk, ghee, oranges, and dry fruits and he has only Rs. 2 at his disposal to spend on these things. We also assume for convenience sake that he spends these Rs. 2 in units of 4 annas each. The utility which he obtains from each commodity is given in the table, but one thing is certain that is the utility derived from the successive units of the same commodity will go on diminishing according to the Law of Diminishing utility.

Commodities.	Utility derived from different units of a commodity.			
Milk	30	26	20	10
Ghee	28	25	20	16
Orange	20	15	10	6
Dry fruits	20	15	10	5

The above table makes it clear that our consumer spends his first four annas on milk, the second four annas on Ghee, third four annas again on milk, fourth on ghee and fifth, sixth, seventh, and eighth on milk, ghee orange and dry fruits respectively. By spending his Rs. 2 in such a manner on these four commodities the marginal utility of every commodity to the consumer will be equal and hence he will obtain the maximum satisfaction from the money he spends. If the consumer makes the mistake of spending the money on these commodities in any different manner he is sure to suffer a loss in utility.

At present he gets at least 20 units of utility from each commodity he purchases so that if he reduces his expenditure say on milk by four annas and spends four annas on ghee he will forego 20 units of utility and will get instead 16 units of utility only. Thereby he will incur a loss of 4 units of utility. If he makes any change in his expenditure the total utility which he will enjoy will be less than what he is getting at present. Therefore in order to get maximum satisfaction or utility out of Rs. 2 spent on these four commodities our consumer will have to spend these Rs. 2 in such a manner that the marginal utility of every commodity is equal. This is known as " Law of Equi-marginal utility."

This law can also be represented by a diagram. Let us assume a person has Rs. 11 to spend and there are three commodities, milk, wheat and books on which he can spend. For the sake of simplicity let us assume that the market price of all the three is Re. 1 per unit the utility of successive units of the three commodities for our consumer goes on diminishing according to the curves in Fig. 3. Thus in the case of Milk the utility of the first unit is $a b$, the utility of the second is $c d$, the utility of the third is $e f$ and of the fourth $g h$ and so on. Similarly the utility of successive units of Wheat and Books also diminishes and is expressed by the respective curves. Now if the man wants to obtain maximum satisfaction he must purchase 4 units of milk, 5 units of wheat and 2 units of books, because by so doing the marginal utilities are made equal ($g h = g r = u v$). If these Rs. 11 are spent over these commodities in any other way the result will be a decrease in satisfaction. For example if instead of buying 4 units of Milk, 5 units of wheat, and 2 units of books he purchases 5 units of milk, 4 units of wheat and 2 units of books, then the additional fifth unit of milk will give only $L M$ satisfaction which is less than $g r$. This means that our consumer will get less satisfaction or utility than before though he spends the same amount.



3.—Diagram illustrating the Law of Equi-marginal utility (returns).

In every day life nobody tries to calculate so minutely about the utilities of various things he purchases for consumption, but roughly people do weigh the relative satisfaction which they enjoy from different things when they spend money over them, and thus try to secure the maximum utility or satisfaction from a given income.

The law of substitution or equi-marginal utility (returns) is applicable to production and saving as well. In the field of production, a manufacturer will always try to distribute his resources among the different factors of production so that his total profit is the highest. He is constantly calculating the marginal productiveness of the different factors of production—land, labour and capital. If at any time he finds that the profits of the factory can be increased by employing more machinery in the place of more labour, he will do that. Similarly if he finds that an additional storey to the factory building will be more costly than additional land, he will build a second storey instead of buying more land, that is, he will substitute more capital in the place of more land. In this way he will invest his resources in such a way that the marginal utility (return) of each unit of his resources whether invested in land, labour or capital is equal.

The law is also applicable in determining our savings. A rational man weighs in his mind the utility which he will get from different units of income if spent at present or reserved for some future date, and he will try to arrange his expenditure in such a way that he obtains equal satisfaction from one unit of a present commodity or one unit of a future commodity. In fact this principle will be found in operation whenever there is a question of putting anything that is limited to a number of possible uses.

One should not assume that man is always guided by this law in his every day life. In fact it becomes very difficult to act according to the law. In many cases people are altogether careless about the satisfaction they enjoy. They incur expenditure irrespective of any such consideration. Moreover many of them cannot precisely estimate the utility or satisfaction they will enjoy by different units of commodities they purchase. Besides these difficulties the fluctuation in prices of commodities also makes it difficult to accurately estimate the utility of the different commodities which one purchases. Lastly in many cases people are compelled to follow the dictates of custom or fashion even though they feel that the money so spent will not bring adequate satisfaction. Expenditure on marriages and other social and religious ceremonies in India, and expenditure on clothes, specially among women in the fashionable society are examples of this. With all these difficulties experienced by the man in acting according to this principle in every day life one has to admit that this law does influence our economic activities and so far as practicable every one of us is guided by this law in our day to day life.

CHAPTER VI

DEMAND

Demand.—We have already noted that there is no limit to our wants. They are unlimited in numbers. Thus man experiences numerous wants and wishes to satisfy them. But only a wish or desire does not constitute demand for that thing. If wishes were horses, then beggars might ride. A beggar's desire for a motor car will not stimulate the production of cars. Demand is used in economics in a special sense. It is not merely desire. When the desire is backed up by the purchasing power and the man in question has the willingness to use that purchasing power in order to pay for it, then only the desire will become demand. In short when we are ready to pay for a thing then our desire becomes effective demand. Thus if I desire to possess a Rolls-Royce motor-car only my wishful thinking will not act as a stimulus to the production to these cars and hence it will not be demand. When I possess the means to pay for a Rolls-Royce motor-car and I am ready to pay the price of that car then alone my desire will act as a stimulus to the production of those cars and hence will be known as demand. Now we are in a position to define demand. Our desire of a thing for which we are ready to pay the price is known as demand.

But demand cannot be separated from price. Unless we do mention the price the word demand remains meaningless. For example if I say that my demand for oranges is ten oranges it will be meaningless unless I express the price at which I am prepared to purchase ten oranges. Since fluctuation in price affects the utility of a thing the demand for a thing cannot be independent of its price. If the price of oranges is Re. 1 per orange perhaps I will not purchase even one orange, at 4 annas I may purchase 2 oranges and it is only at 1 anna per orange that I will go in for ten oranges. Therefore my demand for oranges at one anna per orange is 10 oranges, at 4 annas per orange—2 oranges, and at Re. 1 per orange—nil. Thus it is clear that demand cannot be separated from price. It has always a reference to the price of the thing.

The law of Demand.—The Law of Demand is merely a corollary from the law of Diminishing utility and it is as follows. "When the price falls demand expands and when the price rises demand contracts." According to the law of diminishing utility if the supply of a commodity increases the utility derived from that commodity diminishes. As the utility of a thing diminishes for the buyer the price he will offer will also be less. In other words we can say that at a lower price the demand for

a commodity will be larger. The reverse is also true. At a high price the demand for that commodity will be less. This is not at all difficult to understand since the smaller the quantity we have, the greater the utility we derive from it, and hence we are prepared to pay a high price for it. Now the Law of Demand can be easily understood : " When the price falls demand increases and when the price rises demand diminishes."

Demand Schedule.—The *Demand Schedule* of an individual or a market is the list of different quantities that an individual or individuals in the market will purchase at different prices of the commodity.

Individual Demand Schedule.—It has already been stated that at high prices a person will demand smaller amounts of a commodity than at lower prices. The following is the Demand Schedule of an individual for apples.

When the price is Rs. 2 per seer, a person will demand—one seer

"	"	Rs. 1 $\frac{1}{2}$	"	"	"	—two seers
"	"	Re. 1	"	"	"	—four "
"	"	annas 12	"	"	"	—six "
"	"	"	8	"	"	—ten "
"	"	"	6	"	"	—fifteen "

The above list of different quantities that the individual will purchase at different prices will be known as 'Individual Demand Schedule.'

Market Demand Schedule.—The Market Demand Schedule is composed of the demand schedules of all the individuals in the market. The first difficulty that is faced in deriving the market demand from the individual demands is that the demand schedules of the different individuals in the market are not similar. Some are rich, while many are poor. Even among the rich or poor, temperaments vary and some persons will demand a thing with greater intensity than others. The demands of different individuals show so many different peculiarities that we cannot add together all the demand schedules. But in markets many of the peculiarities which one finds in the demand schedules of individuals will cancel each other, and thus it is possible to form the market demand schedules. The individual desire is fitful but the resultant of the desires of all the purchasers in the market is more or less steady. This is why market demand schedule can be easily framed and they are more dependable than the individual demand schedules.

The following is a Market Demand Schedule.

Price per seer of sugar	Quantity demanded in the market.
as	srs.
16	50
14	60
12	80
10	125
8	200
6	275
4	500
3	800

In the above table, the influence of changes in price on market demand has been studied. Such a table is known as the Demand Schedule. The Demand Schedule can be drawn for an individual, a particular class or group of people, or for the whole market.

Demand curve — The above tables can also be graphically represented and that will be known as Demand curve. The following is a demand curve showing the demand of an individual.

The horizontal axis OX represents the demand of apples in seers and the perpendicular axis OY represents the price of apples per seer. The above diagram fully brings out the fact that when apples could be had at Rs. 2 per seer our imaginary purchaser will purchase only one seer of apples, and with the fall in the price of apples our imaginary purchaser will increase his purchases, so that when the price of apples falls to as 6 per seer he will purchase 15 seers of apples.

In the same manner we can draw a curve on graph paper representing the demand schedule of the whole market.

Increase and decrease of demand. — While discussing the law of demand it has been stated that with the fluctuation in price of a thing its demand undergoes a change. In other words

if the price of a commodity goes high the demand will shrink and if the price goes down the demand will increase. Now we will study in detail what we exactly mean by 'increase in demand' and 'decrease in demand.'

By the term 'increase in demand' we ordinarily mean that the quantity demanded increases at the same price. But, there can also be another form of increase in demand, that is, even if the price rises the demand may remain as before. For instance, if at Re. 1 per seer the demand for grapes was 5 seers and now the price goes up to Rs. 1.8 but even then the demand remains the same i.e., 5 seers. This is an example of increased demand. Similarly the decrease in demand also takes two forms. Firstly, due to certain reasons the demand may decrease at the same price. For example the price of grapes may remain the same, that is, Re. 1 per seer, but the demand may go down to 4 seers. This is an instance of decrease in demand. Secondly, if the price goes down and the demand remains the same and does not increase, then also the demand would be said to have decreased. In short, we can say that if the amount of money spent on a commodity increases the demand has increased and if the amount of money spent on that commodity diminishes the demand will be said to have decreased. In this connection one should not forget that the increase or decrease in the demand for a certain commodity is different from the increase or decrease in the quantity or number of the commodity demanded. An illustration will make the point clear. Let us assume that when the price of oranges was one anna per orange I purchased ten oranges. Now when the price per orange is half an anna I purchase fifteen oranges. In this case the number of oranges has increased but I spend less amount on oranges than before and hence it cannot be said that my demand for oranges has increased. Similarly if the price per orange goes up to one anna and six pies per orange and I purchase 8 oranges at the enhanced price, in that case though the number of oranges comes down, my demand for oranges cannot be said to have decreased, because I spend more money on oranges (12 annas) than before. In fact, my demand for oranges has increased; therefore we will judge the increase and decrease in demand by the increase or decrease in the amount spent on the commodity and not by the increase or decrease in the number or quantity of the commodity.

Elasticity of demand.—It has already been stated above that every commodity obeys the law of demand, that is, if the price falls its demand increases and if the price goes high its demand falls. But the rate of variation in the demand for a commodity following the variation in the price may be slow or rapid. The rate of change in the demand is known as the

' elasticity of demand '. The degree of rapidity or slowness with which the demand changes with a change in prices is known as elasticity of demand.

Elastic demand.—When a slight increase in price causes a considerable decrease in the quantity demanded, or a little fall in the price causes a considerable increase in the quantity demanded, the demand for that commodity is said to be ' elastic.'

Inelastic demand.—When a considerable rise in price brings about a comparatively little fall in the demand of the commodity or a considerable fall in the price brings about a small increase in demand the demand for that commodity is said to be ' inelastic.'

Measurement of elasticity of demand —The above definition of elasticity of demand is not very definite, it is rather vague, because the terms " considerable rise, and considerable fall " or ' little rise and little fall ' do not give any definite idea about the elasticity of demand. Marshall has therefore laid down a method of measuring utility.

According to Marsball " the elasticity of demand is unity, when the amount demanded at a price multiplied by the price remains constant." In other words, the elasticity of demand will be unity if the total sum of money spent on the commodity is the same whatever may be the change in price. For example, let us assume that when the price of oranges is one anna per orange, the number of oranges demanded is 10. When the price per orange is 2 as the number of oranges demanded is 5 and when the price per orange is six pies the number of oranges demanded is 20. In all these cases the quantity of oranges multiplied by the price is ten annas; *therefore the elasticity of demand is unity.*

When a little fall in the price will bring about such a large increase in the quantity demanded that the total sum of money spent on the commodity increases and *vice versa*. For example, let us assume as before that at one anna per orange 10 oranges are demanded. But at six pies per orange 30 oranges are demanded. The total amount in the first case spent was 10 annas but in the second case it is 15 annas; "*therefore the elasticity of demand is greater than unity.*"

Similarly when a little fall in price will lead to a small increase in demand so that the total sum spent on the commodity decreases, or *vice versa*, "*the elasticity of demand is said to be less than unity.*" For example, in the above illustration when the price of oranges is one anna per orange the demand is 10 oranges. But when the price comes down to six pies per orange the demand goes up to 15 oranges. Thus the total amount

of money spent on oranges in the first case is annas ten while in the second case it is 7 annas 6 pies. The elasticity of demand therefore is less than unity.

To be more simple we can say that if the change in demand is just in the same proportion in which the price has changed we will say the elasticity of demand is unity. For example, if the price of a certain commodity comes down by 50 per cent. and its demand is doubled and when the price goes up to double the demand for the commodity comes down to half this will be an illustration of elasticity of demand being unity. If the change in demand is proportionately less than the variation in the price it will be an instance of " elasticity of demand being less than unity." For example, if the price rises by 50 p. c. but the demand goes down by 30 p. c. only or when the price goes down by 50 p. c. the demand goes up only by 30 p. c. then the elasticity of demand for that commodity will be less than unity. Conversely if 50 per cent. increase in the price causes the demand to fall more than 50 p. c. or 50 p. c. fall in the price brings about an increase of more than 50 p. c. in the demand for the commodity the elasticity of demand is said to be greater than unity.

The elasticity of demand can also be represented by curves.

Elastic Demand.

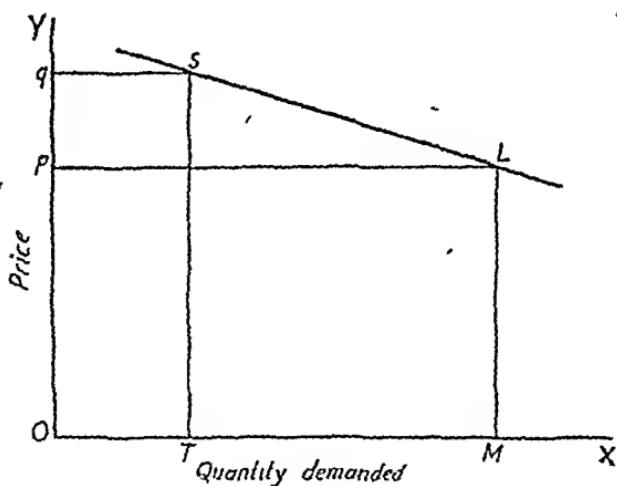


Fig. 4.

The axis OX represents the quantity demanded and OY represents the price. The curve line S. L. represents the elasticity of demand. The diagram shows that the demand is very elastic, when the price was OQ the demand was only OT. But with a slight fall in the price i.e., OP the demand increases to OM.

Inelastic Demand.

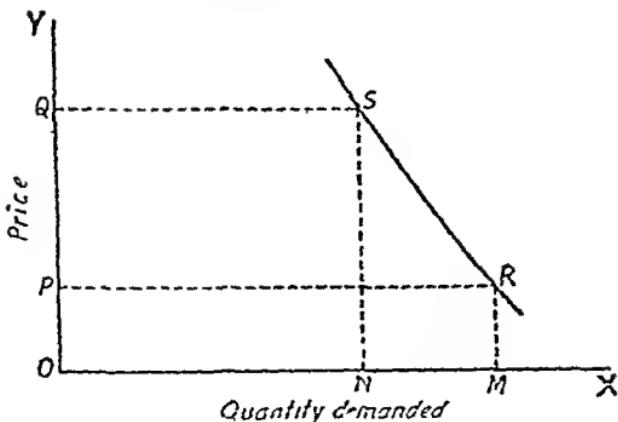


Fig. 5.

In the above diagram the curve line S. R. represents the elasticity of demand. It is quite clear from the curve line that the demand is comparatively less elastic or in other terms inelastic. The diagram shows that at the price OQ the demand is ON. But when the price comes down to OP the demand increases to OM. In this case though the price comes down very low yet the demand increases to a small extent

Factors affecting the elasticity of demand —Now we will study those factors on which the elasticity of demand depends. The elasticity of any commodity depends upon two factors. First the nature of the commodity and second the price of the commodity.

(a) In the case of necessaries elasticity is generally small i.e., they have inelastic demand, since necessaries of life have to be procured in sufficient quantities irrespective of the price. Even though the price may be very high the necessaries of life have to be purchased in sufficient quantities and when people have enough of necessaries they will not purchase much more of the commodity even though the price goes down considerably. For instance, when the price of wheat was 10 seers per rupee before war the quantity purchased by a middle class man was much the same as at 2½ seers a rupee during war. Contrary to this, the demand is elastic in the case of luxuries and comforts, because they are not urgently required, since they are not necessary for life. Therefore when they are cheap people increase their demand for those commodities very much, but when they are highly priced the demand rapidly shrinks, because people can do without those commodities. Thus it is clear that the consumption of articles of comfort and luxury is very much influenced by the fluctuation in their prices. But

there is comparatively little influence of fluctuation of price on the consumption of necessaries. In this connection one thing should not be lost sight of, that is, the classification of necessaries comforts and luxuries will be different for different persons. For instance, wheat may be a necessity for middle class persons in India but it is a luxury or comfort for very poor persons.

We have already seen how what is a luxury for one class of people may be necessary for another class of people. Therefore the same commodities may show different elasticity from one class of people to another according to differences in financial position.

(b) The demand for a commodity is elastic, if it has substitutes. For example, if the railway charges higher freights, people may use more of motor buses and *vice versa*. In cities like Calcutta and Bombay if motor-bus charges are very high people will use more of trains. But one thing should be noted that the aggregate demand for all the substitutes may be inelastic, though the demand for a particular commodity which has substitute may be elastic. Similarly, in the case of poor persons if the price of wheat goes very high they will instead buy millets and other inferior grains. The reason why commodities having substitutes possess elastic demand is that in case their price goes high people will purchase other ones.

(c) The demand is more elastic when a commodity has a variety of uses. If the commodity can be used for more than one purpose the demand is bound to be elastic. For example, coal, rubber, and electricity are put to different uses and therefore their demand is elastic. If the price of electricity falls very low people will use it for cooking and heating purposes also. But if the price per unit is very high electricity may only be used for lighting purposes. Similarly, if coal is very cheap, it will also be used as fuel for cooking purposes. But if it is very costly, then it will be only used for generating steam in the boilers.

Now we will study the influence of price on the elasticity of demand. It has already been stated before that the elasticity of the same commodities may be different for different classes of people, according to differences in their financial position. Therefore the clearest idea about elasticity can only be obtained when we consider the case of each class by itself.

'When the prices are very high, demand is usually inelastic', because in that case very rich persons only can afford to buy that commodity. Thus if the price of such a commodity goes higher, still, it does not cause any appreciable change in the quantity demanded because to the very rich class people the

marginal utility of money is comparatively less and hence they will not mind paying still higher price. In case the price of such valuable commodities comes down a little the demand will not appreciably increase because even at a little lower price these commodities will be beyond the reach of the poor and middle class people. For example, if diamonds are very highly priced and cars became a little cheap, the demand for these commodities will more or less remain the same. Since even at this price people of other classes cannot afford to purchase them.

Similarly, when the price is very low the demand is inelastic because very low prices will enable even poor persons to consume these commodities nearly upto the point of satiety and therefore so long as the prices remain low on the whole little variations in them do not matter much. Thus if the price of such commodities goes down a little or goes up a little it will not bring any appreciable change in the demand for the commodity. People will not mind a little rise in the price because its price was already very low.

Taking into consideration the case of different classes of people we can say on the whole, the price is elastic for high prices and moderately high prices but is inelastic for very low prices

Prof. Taussig lays down that if the distribution of wealth in the society is more equal the elasticity of demand will be greater. But if the wealth is very unevenly distributed in the society the demand for most commodities will be inelastic. The reason is not difficult to understand. When the means of purchasing commodities will be more or less equally distributed in the society the change in price will affect the demand of the whole society and therefore the demand of the society will be more elastic.

Besides the above factors habit also has a profound effect on the elasticity of demand. Any commodity which is habitually consumed by persons, the demand for that commodity is always inelastic. For example, those who are in the habit of smoking tobacco will purchase it without caring at all for the price. After purchasing sufficient for their purpose they will not purchase any more even if the price of tobacco is low.

The demand is more elastic if the use of the commodity can be postponed. For example, my shoe is a bit worn out. If the price of a shoe is lower I may discard my old worn out pair and purchase a new one. But if the price is high I might decide to go on with the old pair for some time more and thus postpone the purchase. Demand will be greater in this case at a lower price. The consumption of necessities cannot be postponed and hence their demand is inelastic.

Thus the elasticity of demand for a commodity depends on the class of people, rich or poor, whose demand we are considering, and on the nature of the commodities *e.g.*, whether it belongs to the category of necessary comfort, or luxury, whether it has substitutes or variety of uses, whether its consumption can be postponed for the time being or not, and whether the price is already very high or low.

CHAPTER VII.

SPENDING AND SAVING.

Spending.—Every human being has his wants and he likes to satisfy them. In the present day economic organisation the most popular and commonly used method is to spend money and procure the goods which will satisfy these wants. Whenever we want something we go to the bazaar and buy it for money. Every one of us satisfies his wants mainly by spending money. There are certain wants which man satisfies by his own personal labour. For example, every farmer satisfies his wants of wheat and other cereals by producing those cereals himself. Similarly, he produces his own vegetables, keeps milking animals for milk and ghee, washes his own clothes, repairs his house and procures his own fuel. But even the farmer has to depend for many things on the market and has to spend money for procuring them. For example, he has to spend money in purchasing cloth, spices salt, agricultural implements, and so many other things. Thus we can say 'spending' is a method by which we satisfy our wants. In the present day world man's wants are mostly satisfied by spending money.

It is needless to say that the existence of markets in every city, town and village and the development of the means of communication and transport has created facilities for spending which did not exist before. In olden times weekly markets (Painths) and periodical fairs were the only occasions when people could spend. Besides this, travelling merchants also used to visit the villages and the villagers used to purchase their requirements from them. Though markets have developed all around in the country in cities and towns, yet the weekly 'painths' and periodical fairs have not lost their importance in India. Even now the average villager looks to these weekly markets or painths and fairs for spending money and purchasing his requirements. These days, Exhibitions also give a great opportunity for spending and they have become very popular.

Principles of Spending.—Every man who spends his income tries to obtain utmost satisfaction out of it. It has been discussed above that a man who sticks to the principle of equi-marginal utility will get the greatest benefit out of the money he spends. Therefore in order to obtain the maximum satisfaction out of the income one should firstly adopt the law of equi-marginal utility as far as possible. The second factor which has to be considered is the price of those goods which we purchase. Besides these two, there are certain other things as well which are related to the skill of spending.

The skill in spending depends firstly on the ability to judge whether the thing which one proposes to buy will satisfy the particular want. In some cases we are misguided by the shop-keeper, or we are led away by the outward appearance of the commodity concerned and we buy it, but afterwards we find out that it does not serve us well. This defect in buying stands in the way of obtaining the maximum benefit out of the money spent. In this condition the ability to judge the exact quality of a thing is also included. An example will make it clear. Let us assume that a student needs a warm clothing to protect his body in winters. Of course there are many things which serve the purpose. For instance a woollen Jawahar Bandi made of Pattoo or a half cotton mixed Ludhiana woollen pull over. Now if the student under the influence of the sales man's selling tricks or lured by the beautiful appearance of the pull-over purchases it and afterwards feels that he could get much more utility by purchasing a Jawahar Bandi for that price, then he has committed the mistake of the first type. In other words, the student failed to judge correctly which of the two could satisfy his want of protecting the body from cold better. But there can be another kind of mistake in buying a thing. For example, I am in need of a pair of shoes and the shop-keeper brings before me two pairs having the same price and I purchase one which has a better shape. But later on I come to know from the experience of my friends that the other one was more durable, then I feel my mistake.

Another factor which is important in this connection is the knowledge where our requirements can be had at cheap price. It is a common experience that many things can be had at a cheap price from certain shops and places. Those who know this secure greater benefit from the money they spend. Many of us do not know all this, or due to laziness we do not take the trouble of going to those places and thus we do not take advantage of those shops and places.

In those bazaars where higgling and bargaining is practiced those who are skilful bargainers and can higgle well, purchase their requirements at low prices.

It has already been stated above that the price of commodities also determines the benefit which a man secures from his expenditure. But this requires a little more explanation. We know that if the price of goods is low we can buy a large quantity by spending less money, but if the price is very high we have to spend a larger sum in order to procure the same quantity of commodities. Thus it is clear that the lower the price the more is the benefit we derive out of the money spent. One should not forget that when we say that price is low we do not mean thereby the price of a particular commodity but prices in

general. The price of a particular commodity may fluctuate but if the general price level does not change, the fluctuation in the price of a particular commodity does not matter much. In short, we can say that if the price of those commodities which we commonly use is low we will obtain greater benefit from our expenditure because at a low price we will get a larger quantity of commodities to consume by spending comparatively less money.

Relation between spending and saving.—Every one of us has to spend in order to satisfy our wants, and this expenditure one has to incur out of his income. But ordinarily man does not spend his total income. A certain portion of his income he spends voluntarily on religious and social ceremonies and on charity. Similarly, a certain part of his income he has to hand over to the state in the form of taxes. The religious and the social obligations of the man demand that he must pay a certain portion of his income in the form of taxes in order to finance the state activities. The modern state performs numerous functions of preserving peace, administering the country on progressive lines and to perform nation building activities like education, sanitation, medical help, agricultural development and industrial development, etc. In order to perform these functions properly the state needs money and it can raise the required amount from the people. Similarly, as a member of the society it is the duty of every citizen to give donations for charitable and other social objects. Thus a certain part of man's income is spent on charity and taxes.

But what ever remains after paying taxes and charity the whole of it is never spent on the satisfaction of every day wants. After spending a certain portion of his income everybody begins to compare the utility which he will derive by spending further on his present wants and the utility which he will derive if the money is saved at present and is spent at some future date. When he finds that by spending further on his present day wants he will derive much less satisfaction or utility than by saving that money for future use, he stops spending further and saves. There are many reasons why a man is induced to save. He is induced to save in order to ensure a decent living for himself and his family members in future. Every earning member of the family has certain definite future responsibilities such as the education of his sons and daughters, their marriage, etc. Besides these known and definite responsibilities there are certain unknown and uncertain liabilities which a man has to undertake. For instance prolonged illness in the family, some calamity befalling the family so that the sources of income of the family might dry out. And one has to lay, by

something to meet these extraordinary known and unknown expenses. In short one has to save for a rainy day. There are some who save in order to earn interest over the saved wealth. In short we can say that an average man saves a certain portion of it and does not spend the whole of his income. This saved wealth is used for producing further wealth. Either the man who saves himself invests in some business or trade and thus it helps further production of wealth, or if the man who saves does not want to enter himself in some trade he deposits his savings in some bank and the bank lends the money so deposited to businessmen and industrialists and thus the saved money is used for producing further wealth.

The brief account given above clearly shows that the saving is as important for the society as spending. Therefore the controversy whether saving is less important for the society than spending or vice versa is fruitless. In fact both are equally important and a balance between the two is essential for the welfare of the society. The society which cannot keep a balance between spending and saving is bound to suffer economic loss. This needs a little explanation.

If any society saves too much and spends very little portion of its income the result will be that there will be very little demand of goods in the society while there will be too much of supply in the market. The reason is obvious : when too much wealth will be saved it will be used for producing more wealth, so that the supply of goods in the market will be too much while the demand will be too little. This will result in a heavy fall in the price of those commodities, the producers will get either no profit or very little profit and thus they will be discouraged from producing any more. Many factories will cease working and there will be general unemployment. Trade and industry will come to a stand still and the country will have to face great economic calamity. In the present day capitalistic system the periodic trade depressions which the society has to face are mainly due to the fact that a large section of the population (Farmers and labourers) have no means to purchase goods as they are extremely poor. It is clear therefore that in order to keep the economic system going in order and to avoid violent disturbances it is necessary that people should spend a good portion of their income. In case the majority of people are so poor that they cannot spend enough, the economic system will not work very smoothly. This may be due to bad distribution of wealth. Whatever may be the cause it has to be noted that if people do not spend enough it will go against the best economic interests of the country.

However, it should not be forgotten that saving is as essential for the smooth working of the economic system as spending.

Production of wealth depends upon capital. Unless there is enough capital the production of wealth will be hampered, and capital accumulation directly depends upon saving. If in a society people are very extravagant and they do not save, it will check production and the wealth produced in such a society will be less. Less production will also result in trade and industrial depression and unemployment among people. Therefore in order to produce sufficient wealth for the society a certain portion of the social income ought to be saved.

The above discussion clearly brings out the fact that saving, and spending both are essential for the prosperity of the society and a right balance between the two should be our object to achieve. Economic progress can only be maintained by keeping a balance between spending and saving.

Social side of spending.—Man is a part of the society, and therefore whatever he does has its bad or good effect on the society. Thus when an individual spends his income in order to satisfy his wants, his expenditure may result in good or bad effect on the society as the case may be. It is quite possible that the expenditure which an individual incurs on a particular object may be harmful to the society. A closer study will no doubt convince us that any expenditure which is harmful for the society cannot be good for the individual because there is no difference in the interests of the individual and the society. After all, individuals form the society and therefore the interests of the society and the individual are the same. This outwardly difference between the interests of the society and the individual is not real. In fact it is due to the ignorance of the individual or his narrow view point. An illustration will make it clear. Let us assume that a man is addicted to drinking wine and he spends a large portion of his income on his drinks. There is no doubt that he obtains satisfaction from wine and this is why he is prepared to spend so much on it but his drinking wine is neither in his interest nor in the interests of the society.

If the society is composed of such people who are addicted to drink or there is a large percentage of such people in the society, it will result in the loss of efficiency, increased poverty, demoralisation and increased crimes in the society. As far as individuals are concerned they who are so much addicted to wine are sure to ruin themselves, though on account of their foolishness they do not see it. Let us take another example. Indians began to purchase foreign goods because they got it cheap and therefore from the individual's point of view it appeared as a profitable bargain. Even to-day people go in for foreign made articles because they are comparatively dear. But from the social point of view it is unwise to

purchase goods made in foreign countries when the same goods can be manufactured or are being manufactured in ones own country. This does not mean that foreign trade should be stopped but there are certain limits which should not be lost sight of by any country; otherwise the country is bound to become poor and economically backward India is a clear example. It was due to unrestricted import of foreign goods that her industries died out and later on her industrial development was very slow. Thus if due to unwise spending of the people the economic condition of the country becomes unsatisfactory every one will suffer and the country on the whole will be poor. Under these circumstance it becomes the duty of the state to exercise control over the spending of the people and to make laws regarding it. It should not be lost sight of that this control on individual spending is only meant to save the society from the loss which is bound to occur if the individual is allowed to spend as he likes, unmindful of evil social consequences of his expenditure. Restriction placed on the sale of wine and other intoxicants and levying a duty on the imported articles from foreign countries are examples of such control exercised by the state on individual spending. In times like war control of individual spending becomes more pronounced and necessary.

Spending and Production.—There is a close connection between spending and production. The ultimate object of spending is consumption. Those commodities which are consumed in large quantities by people will be produced in large quantities by producers. Thus spending determines the direction of production. If the majority of people in a country spend a large percentage of their money on harmful things the factors of production available in the country will be directed towards producing those very harmful things. Thus the society will be put to double loss. Firstly the society will be put to loss because of the evil effects of harmful consumption. Secondly the capital and labour used in producing those harmful commodities could not be used in producing useful commodities. Let us assume that in a country people are in the habit of drinking and they spend a large sum on wine and other intoxicants. This will result in the evil effects of drinking on the society. Moreover the labour and capital which produces these intoxicants cannot be utilised for producing more useful things. If this habit could be checked the labour and capital required to produce these intoxicants could be diverted to the production of other useful commodities. For example, in China when the Government made opium eating a criminal offence the cultivation of opium stopped and the land, labour and capital relieved from opium cultivation was absorbed by increased cotton cultivation,

CHAPTER VIII. FAMILY BUDGET.

Family Budget — It is certain that most of different degrees of income and expenditure of a particular family during a definite period is known as the family budget of that family for that period. By studying the family budget of a particular family or the representative family budget of a certain class of people we can find out what percentage of their income particular families or class of people spent on different items. For example, if we want to study what percentage of their income the lower middle class of educated people spend on food we can select some representative families and frame their budgets. By studying these budgets we can learn the situation as regards the percentage of income spent by them on food, and that percentage can be taken as true for all the people belonging to that class.

Engel's law of consumption : — In the middle of the nineteenth century Dr. Engel a German Economist for the first time collected a large number of family budgets in Germany. After studying these family budgets he produced his conclusion in the form of a law. He came to the conclusion after studying those budgets that as the income of an individual goes higher the percentage of total expenditure on food and other necessaries for existence go on diminishing, the percentage of total expenditure on clothing more or less remains the same, and the percentage of total expenditure on larger rent, light, fuel and other necessaries also remains more or less the same. But the percentage of total expenditure on comforts and luxuries such as education, health, means of amusement, and recreation etc. constantly goes on increasing. He also stated that the major portion of the income of a family with low income is spent on necessities for existence. Based on the above conclusion Dr. Engel enunciated his famous law of consumption which is better known as 'Engel's law of consumption'.

Use of Family Budgets — Collection of family budgets has a great utility and advantage. Firstly those who keep control over their income and expenditure by framing budgets never remain in dark about their financial condition and they can put a check on any wasteful expenditure. If a person studies his family budget he can easily find out where economy is needed and on which item more money should be spent. He can also find out by studying his family budget whether he is spending enough on food etc. to maintain his health and efficiency. Similarly, he can detect by studying his budget whether he is not spending too much on comforts and luxuries at the cost of necessities. Therefore it is in the interest of

every house-holder to keep his account of income and expenditure in the form of a budget.

To an economist family budgets are even of greater utility. It is only by studying the family budgets of different classes of people that economists can find out the percentage of income spent by different classes of people on necessities, comforts, and luxuries. A study of family budgets also enables us to know how far the religious practices and social customs have a hold on a particular class of people. A study of family budgets is the only means of finding out whether any particular class of people spend on harmful things which are harmful for health, and which demoralise the man. For instance, if one studies the budgets of low class people in urban centres he will find that they spend a substantial portion of their income on wine and other intoxicants. In short, we can say that an economist can correctly ascertain the standard of living of the people and find out whether society on the whole is spending sufficient on nutritious food from the health point of view or not. Whether educational needs of young boys and girls are looked after and they are properly educated, whether they live in well ventilated and decent houses, and whether sufficient medical aid is provided or they are living in insanitary and ill-ventilated houses and do not get sufficient medical help. It is only after gathering all these facts about the consumption of the people in a society that the economists can suggest in what direction improvement is necessary and how that improvement can be brought about.

To a statesman as well the above information derived from the family budgets is equally useful. In order to maintain peace and to enhance the prosperity of the people it is absolutely necessary to check the consumption of undesirable and harmful things in the society. And if the family budgets show a tendency in this direction the state should interfere in the consumption of the people by making laws and prohibiting or restricting the consumption of such harmful things. By studing the family budgets the Government can easily find out the commodities which are specially consumed by the general masses and those commodities which only occur in the consumption of rich people. This information is of great help to the finance minister in levying taxes on commodities. Commodities which are mostly consumed by the masses should not be taxed and if at all a tax has to be levied it should be very light. On the contrary those commodities which are mostly consumed by the rich should be heavily taxed.

Thus the family budgets are of great use to a house-holder, an economist, and a statesman.

Budget.—Now we will study how the family budgets should be prepared. In preparing such budgets care should be taken to include all other sources of income besides the regular and certain source of income. Similarly if a monthly budget is prepared care should be taken to include all those items of expenditure which might not have been incurred in that particular month but which have to be incurred in a certain period of time. Such expenditure should be spread over the whole of that period and it should be included in the monthly budget. For example, expenditure on clothes, shoes, religious and ceremonial expenses, travelling etc.

Collection of Data for Consumption Budget.—It is not at all an easy job to collect data for consumption budgets specially in India. The wide-spread illiteracy in India and great differences in the prevailing customs, mode of living, and caste traditions cause great differences in the consumption of people otherwise belonging to the same economic class. Because of illiteracy the average man in India does not keep account of his income and expenditure and therefore those who want to prepare family budgets have to collect the data themselves.

The student should better start with his own family. He should keep the account of his family's income and expenditure for one year and thereby prepare his family budget. If he finds it difficult to keep account for the whole year at least one month's account must be maintained. One should not forget that in order to prepare a faultless and accurate budget one year's accounts must be maintained in every case.

If the student wants to prepare the budget of a labourer, farmer, or an artisan he should himself write down his account for at least a month or preferably for a year. It should be remembered that nobody will welcome this enquiry into his family secrets and therefore special care should be taken to win the confidence of those persons, whose family budget is sought to be prepared. The reason of this hesitation on the part of the people is not difficult to understand. The financial position of some may be hopeless but they do not want to let people know anything about it, lest they may be looked down upon in society. Some may be very well off but they do not want this fact to be advertised and known by others. Somebody may be a debtor while another may be carrying on money-lending. A third man wants people to believe that his income is less because of income-tax. In short, nobody wants to give out his true financial position and therefore the task of collecting correct data becomes still more difficult. Therefore it should be the first endeavour of the student to come in close contact with those persons so that he may win over their confidence. Thus once they are confident that the information

gathered by the student shall not be used against them then they will give out their true financial condition. Therefore the first step in preparing family budget is to find out a reliable and trustworthy person who will disclose his financial condition to the student. But this is not sufficient, the person should be asked to keep his day to day account and if it is not possible due to illiteracy or unwillingness of that person the student should himself write down his daily account. Ordinarily the framers of budget go to a farmer or labourer and within a few hours try to secure the required information about his income and expenditure for the whole year. Budgets prepared from such data are worthless and serve no useful purpose. Assuming that the person concerned has full confidence in the *bona fides* of the enquirer and is willing to supply him the true information even then it is not possible for the person to do so. In most cases even educated persons in India do not keep regular accounts and farmers or labourers being illiterate cannot be expected to keep them. Thus the information supplied is based on estimates. Nobody can be so sure of his memory and the information so supplied is bound to be wrong. Therefore the collection of data by putting questions to a labourer or farmer within a few hours is a very faulty method and no useful purpose will be served by such data. It is only when regular accounts are written or maintained that reliable data can be made available.

In keeping the account of expenditure the following points should be specially noted :—

1. The account should be written every day, otherwise there is likelihood of mistake.

2. While keeping the account of expenditure even those things should be included in it which have not been purchased during the period under review, but were purchased before and were consumed during that period for which budget is being prepared. For example, if a farmer consumes wheat produced by him on his own farm the price of that wheat should be included in his expenditure. Besides this, if any commodity was purchased during the previous year or month and has been consumed during the year or month for which the account is being maintained, it should also be included in the expenditure.

3. No expenditure should be taken down twice.

When the complete account of the month or the year has been taken down the budget should be prepared. While preparing the budget of consumption one thing should not be forgotten that no item of expenditure which has not been spent for consumption should be included in it. For example, if a

farmer spends Rs. 20 for purchasing 5 mds. of wheat seed, these Rs. 20 should not be included in his expenditure, because this expenditure has been incurred for production and not for consumption. Moreover, there will be some such commodities purchased for consumption which will last longer than the period for which budget is to be prepared. For example, let us assume that we want to prepare consumption budget of a man for one month and during that month he purchases a pair of shoes costing Rs. 6. It is certain that the pair of shoes will not exhaust its utility during that very month, it will give services for one year. Therefore it will be wrong to include the whole amount that is Rs. 6 in that month's expenditure. It should be spread over 12 months and 8 as, only should be included in the expenditure for that month. Similarly, if a person spends Rs. 250 on furniture and the average life of the furniture is 10 years then Rs. 25 should be included in the expenditure of that year for which accounts are being maintained. In short, the expenditure incurred on every item should be properly scrutinised and only that amount should be debited to the expenditure of that month or year which is proper.

For the sake of clarity and convenience the expenditure should be divided into the following heads :—*I Food, Clothing, House, Light, fuel, stimulants and intoxicants health, education, interest, household equipment, religious, and social ceremonies, litigation and taxes, and miscellaneous.* The expenditure incurred on these heads should be added and the total expenditure incurred for consumption during the period under consideration should be found out. Afterwards the expenditure incurred on each head (such as food, clothing etc.) and its percentage to the total expenditure on consumption should be found out. For example, if any person spends in all Rs. 50 in a month and Rs. 20 per month be spent on food, then he spends 40% of his total expenditure on food. Exactly in the same manner the percentage of expenditure on each head to the total expenditure should be calculated, and those percentages should be represented on a graph paper.

If the family budget is properly drawn up it will show clearly whether the family expenditure is being incurred on right lines or not. If more money is being spent on luxuries and intoxicants at the cost of necessities for life and efficiency it is in the interest of the family that expenditure should be curtailed on those items and more money should be spent on necessities for life and efficiency. Similarly, if expenditure on religious and social ceremonies and litigation is out of all proportion it should also be curtailed. In brief, a study of family budget reveals the defects of our consumption and points out the time of improvement.

Let us take two budgets one of a farmer and another of a teacher to show how the budgets should be prepared. In order to avoid confusion on account of rapid fluctuations in the prices during war time, budgets prepared according to pre-war prices are being given.

Family Budget of Ramu—a farmer.

The family consists of two adults husband and wife, a son aged 10 years and a daughter aged 3 years. Ramu is an average cultivator with a heavy burden of old debt. He has 30 bighas of land under occupancy tenancy. He is Abir by caste and lives in Hirapur a village 5 miles from Etah the district head-quarters.

Item of Expenditure.	Rs.	a.	p.
1. Food.			
(A) Cereals.			
Wheat	5	4	9
Barley	26	4	9
Bajra	13	8	0
Gram	3	0	0
Rice	1	10	0
Urd	1	0	0
Masur	0	10	0
Arhar and other Pulses	0	14	0
(B) Fruits and Vegetables.	1	2	0
(C) Milk and Ghee.			
Milk	3	0	0
Ghee	6	10	0
(D) Other things			
Salt	0	14	9
Spices	1	8	0
Oil	1	7	6
Gur	0	14	0
Suur	0	4	3
Total	68	0	0

Item of Expenditure	Re. <small>as</small>	ps.
2 Clothes.		
(A) Dress.		
2 Bandis	2 10 0	
2 Mirjais	1 0 0	
3 Kurtas	2 13 0	
4 Dhotis	3 8 0	
2 Caps	0 5 0	
(B) Other Clothes.		
1 Razai	2 6 0	
2 Chadars	1 6 0	
3 Angochas	0 6 0	
Total	14 8 0	
3. House.		
Repairs	0 12 0	
Chappar	3 14 0	
Total	4 10 0	
4. Fuel and Light.		
Fuel	4 9 0	
Kerosene oil	0 15 0	
Total	5 8 0	
5 Household equipment.		
Earthen Pots	0 8 0	
Brass Thali	1 2 6	
Brass Kalsia	2 14 6	
Total	4 9 0	
6 Health.		
Medicine*	1 12 6	
House cleaning	0 3 6	
Total	2 0 0	

* This expenditure was incurred when Ramu's son fell ill.

Item of Expenditure.	Rs. as. ps.
7. Education.	
Fees	0 9 0
Books	0 5 6
Slate	0 6 0
Slate Pencil	0 2 6
Total	1 7 0
8. Stimulants and Intoxicants.	
Tobacco	5 14 0
Biri	0 2 0
Total	6 0 0
9. Interest	20 0 0
10. Miscellaneous.	
(A) Social	
(B) Religious	
Shraddha	1 15 3
Katha	1 0 9
(C) Recreation	0 0 0
Total	3 0 0

A brief Account of Ramu farmer's consumption Budget.

for one year.

Percentage to
Rs. as. ps. total expenditure.

Item of Expenditure.	Rs. as. ps.	Percentage to total expenditure.
1. Food	68 0 0	52.5%
2. Clothing	14 8 0	11.2%
3. House	4 10 0	3.6%
4. Fuel and Light	5 8 0	4.2%
5. Household equipment	4 9 0	3.5%
6. Health	2 0 0	1.5%
7. Education	1 7 0	1.1%
8. Stimulants and Intoxicants	6 0 0	4.7%
9. Interest on Loan	20 0 0	15.4%
10. Miscellaneous	3 0 0	2.3%
Total...	129 10 0	100%

Diagram showing Ramu farmer's percentage of expenditure on different heads.

Ramu farmer's Budget.

Miscellaneous		2.3%
Interest		15.4%
Stimulants and intoxicants		4.7%
Education		1.1%
Health		1.5%
Household equipment		3.5%
Fuel and Light		4.2%
House		3.6%
Clothing		11.2%
Food		52.5%

Travelling expenses

charity

other

Total

Saving

Insurance

Cash savings.

Total

A brief Account of expenditure on consumption.

Item of Expenditure.	Rs. as. ps.	Percentage of total expenditure.
1. Food.		
2. Clothes, shoes and jewellery.		
3. Intoxicants.		
4. House.		
5. Fuel and Light.		
6. Household equipment.		
7. Health and sanitation.		
8. Education.		
9. Interest.		
10. Social and Religious.		
11. Taxes and court expenses.		
13. Miscellaneous.		
12. Savings.		100%

TotalSyt. Prem Narain Mathur's Consumption Budget
for a month.

Name— Syt. Prem N. Mathur.

Family members—2 adults husband and wife, 3 children
aged 5, 3, 1 years respectively.

Occupation— Teacher.

Income.

Monthly salary	Rs. 75
Extra income from articles	Rs. 4
	Total Rs. 79.

Syt. Prem Narain is a resident of Udaipur (Mewar) but at present he is employed as a teacher in Banasthali (Jaipur) Vidyapith. The institution provides a well ventilated house to every teacher and as such Syt. Prem Narain has not to spend any amount on rent of the house. His wife manages the household affairs unaided by any servant. There is no expenditure on the education of children because they are too young. Once a year the whole family has to go to Udaipur, their native place. Besides this occasionally Syt. Prem Narain has to go about to different places in Rajputana and United Provinces. Their standard of living is that of a middle class. He keeps regular and accurate account of his expenditure. Banasthali is a very small village and is 6 miles away from the railway station Nawai which is also a small town.

Details of Consumption Budget.

1. Food.

(A) Cereals

Wheat	...	Rs. 5-0-0	one md. at the rate of Rs. 5 per md.
Bajra	...	Rs. 0-8-0	5 seers at the rate of Rs. 4 per md.
Maize	...	Rs. 0-8-0	5 seers at the rate of Rs. 4 per md.
Rice	...	Rs. 0-8-0	2½ seers at the rate of Rs. 8 per md.
<hr/>			Total Rs 6-8-0
<hr/>			

(B) Pulses

Urd	...	Rs. 0-8-0	3 seers at the rate of 6 srs. per Rupee.
Moong	...	Rs. 0-8-0	3 " " 6 " "
Gram	...	Rs. 0-8-0	3 " " 6 " "
other	Pulses	...	Rs. 0-2-0 1½ " " 10 " "
<hr/>			Total ... Rs. 1-10-0
<hr/>			

(C) Vegetables and Fruits.

Vegetables	...	Rs. 1-0-0	Vegetables and fruits are not available in the village only some common green vegetables are produced by the farmers.
Fruits	...	Rs. 0-8-0	

Total	...	Rs. 1-8-0
		<hr/>

(D) Milk and Ghee.

Milk	...	Rs. 4-0-0	one md. at the rate of Rs. 4 per md.
Ghee	...	Rs. 5-0-0	

Ghee	...	Rs. 5-0-0	5 seers at the rate of one seer per rupee.
Total	...	Rs. 9-0-0	

Milk and Ghee are very cheap in that village because it is in the interior and therefore export is not possible.

(E) Other Eatables

Sugar ... Rs. 2-8-0
Gur ... Rs. 0-2-0

Salt and spices ... Rs. 0-6-0

Oil ... Rs. 0-8-0

other articles ... Rs. 2-0-0
(sweetmeat etc.)

Total ... Rs. 5-8-0

Total expenditure on food Rs. 24-2-0

2. Clothing.

	Wife.	Annual.
Sari	... Rs. 2-12-0	—8 Saris are used in a year. The cost, per Sari is on the average Rs. 4-2-0.
Blouson	... Rs. 0-9-6	—8 Blouses with sewing charges.
Petticoat	Rs. 0-6-0	—4 Petticoats with sewing charges.
Woollen clothing	.. Rs. 0-2-0	—a woollen waist coat in two years.

Total ... Rs. 3-13-6

	Husband.	Annual
Dhoti	... Rs. 1-8-0	—7 Dhotis in a year.
Baniayan	Rs. 0-3-0	—4 Baniayans in a year. " "
Kurta	... Rs. 1-0-0	—8 Kurtas in a year.
Woollen clothing	Rs. 0-4-0	—Woollen Jawahar Bandi.
Total	... Rs. 2-15-0	

	Children.	Annual.
Frock	... Rs. 0-12-0	—8 Frocks.

Under wear ... Rs. 0-1-0 —3 Underwears.

Shirt ... Rs. 0-15-0—12 shirts for elder son and 8 for the younger.

Shorts ... Rs. 0-3-0—4

Payjama Rs. 0-4-6—2 Payjamas

Coat ... Rs. 0-2-9—one coat for the elder and one for the younger son.

Woollen clothing... Rs. 0-8-0—Woollen coat.

Total ... Rs. 2-7-3

Total expenditure on clothing...Rs. 9-7-9. —

3. Fuel and Light.

Fuel :—

Timber ... Rs. 0-8-0.

Dung cakes ... Rs. 0-0-6.

Total ... Rs. 0-8-6.

Light :—

Kerosene oil... Rs. 1-4-0

Total of Fuel and Light...Rs. 1-12-6

4. House Rent.

The institution has provided quarter free.

5. Shoes and chappals.

Adult male.

Annual.

Chappal ... Rs. 0-4-0 } —2 pairs of chappal in a year costing Rs. 1-8-0 each.

Adult female

Chappal ... Rs. 0-2-0 } —1 pair of chappal in a year.

Children

Shoes ... Rs. 0-3-3 } —four pairs of shoes Rs. 2-3-0.

Total ... Rs. 0-9-3

6. Bedding etc.

For the whole family.

Lihaf	... }
Gadda	... }
Pillow	... }
Cover sheet	... }
Dohar	... }

Rs. 0-8-0.

Miscellaneous

Barber ... Rs. 0-4-0

Washerman ... Rs. 1-0-0

Toilet ... Rs. 0-14-0

Miscellaneous.

Postage ... Rs. 1-0-0
 Books etc. ... Rs. 4-0-0
 Maid-servant etc. ... Rs. 4-0-0
 - Glass bangles Rs. 0-3-0
 Travelling ... Rs. 5-0-0
 To father at home ... Rs. 15-0-0
 (Udaipur)
 - Other expenses ... Rs. 2-0-0 This includes expenses on medicines
 and other expenses.
 Total expenses on Education, health, and comfort...Rs. 33-7-0.

7. Saving.

Insurance

Premium ... Rs. 8-0-0 He has a life policy for Rs. 2,000

Cash saving... Rs. 1-1-6

Total saving ... Rs. 10-1-6.

Total monthly Budget... Rs. 79-0-0.

A Brief Account of Syt. Prem Narain Mathur's Budget.

Item	...	...	Rs.	as.	ps.	Percentage of Total expenditure.
Food	...	...	24	2	0	30.5%
Clothing	...	...	9	7	9	12%
House (Free)	...	...		
Fuel and Light	...	...	1	12	6	2.3%
Shoes and Chappals	...	...	0	9	3	6%
Bedding etc.	...	...	0	8	0	6.96
Other expenses	...	...	33	7	0	42.4%
Saving	...	...	9	1	6	11.5%
Total	...	...	79	0	0	100%

Syt. Prem Narain is a nationalist a habitual weaver of Khaddar and therefore he does not put on coat, pant etc. He only uses chappals and lives a simple life.

Family Budget of Syt. Prem Narain Mathur Diagram.

Saving		11.5%
Miscellaneous		42.4%
Shoes chappals and bedding etc.		2.3%
Fuel and Light		1.3%
Clothes		12%
Food		30.5%

House is provided free by the institution which he serves.

The following *Form* can be used to collect the data for consumption budget of a family :—

1. Name of the head of the family.
2. Name of the village town or city.
3. Number of family members.

Male adults.

Female adults.

Children (below the age of 14 years).

Number of members of the family who are living and working outside the village.

4. Occupation.

Caste.

Income

Income from all sources should be included for instance salary, zamindari income, income from interest, income from sale of agricultural produce, income from money orders sent by family members who are working outside the village, income from business etc.

Expenditure.

I. Food.

Name of commodity.	Quantity.	Rate. Rs. as. ps.	Price. Rs. as. ps.
(A) Cereals			
Wheat			
Barley			
Jwar			
Bajra			
Gram			
Maize			
Rice			
Urd			
Moong			
Arhar			
Masur			
Other Pulses			
Other cereals			
(B) Vegetables and Fruits			
(C) Milk			
(D) Ghee and oil			
(E) Salt and spice			
(F) Gur and Sugar			
(G) Meat, eggs, and fish			
(H) Sweetmeat			
Other			
Total of food			

Name of commodity.	Quantity.	Rate. Rs. as. ps.	Price. Rs. as. ps.
Shoes and chappals			
Other			
(D) Other clothes			
Lihaf			
Kambal (Blanket)			
Dohar			
Durree			
Bed sheet			
Angocha			
Other			
Total of clothes, shoes, and jewellery			

Intoxicants.

	House		
Wine			
Opium			
Ganja, Charas and Bhang			
Tobacco and Betel leaves			
Cigarette and Biri			
Tea or Coffee			
Other			
Total of Intoxicants			

Rent of the House (If it is a hired house)
 Repairs and white washing (If the house is owned)
 Total of Expenditure on House

2. Clothes, shoes and jewellery.

Name of the commodity.	Quantity.	Rate. Rs. as. ps.	Price. Rs. as. ps.
(A) For male adults			
Dhoti			
Kurta or Shirt			
Coat			
Pant			
Payjama			
Shorts			
Cap or hat			
Turbans			
Mirzai			
Bandi			
Shoe or chappal			
Other			
(B) For female adults			
Labga or Ghaghra			
Sari			
Orhni chadar			
Blouse			
Kurti			
Jumper			
Petti coat			
Jewellery			
Chappals			
Other			
(C) Children			
Dhoti			
Kurta or Shirt			
Cap			
Coat			
Short			
Sari			
Blouse			
Ghaghra			

Fuel and Light.

Item of Expenditure.	Quantity.	Rate. Rs. as. ps.	Price. Rs. as. ps.
Fuel			
Kerosene oil			
Electricity			
Other			

Total of Fuel and Light.

expenditure.

House-hold Equipment.

Item of Expenditure.	Quantity.	Rate. Rs. as. ps	Price. Rs. as. ps.
Beds or cots			
Utensils			
Tables, chairs, sofa, etc.			
Trunk or Boxes			
Other furniture			

Total

Health.

Fee of Vaid, Doctor or Hakim

Price of the medicine

Sanitation Expenses

Total.

Education.

Fees.

Books

Stationery

Tutor

Other

Total

Interest.

Amount of Interest paid

Social and Religious Expenses.

Mundan

Marriage

Sacred Thread Ceremony

Shradh

Katha

Charity

Guests

Total

Taxes and Court Expenses.

Court Expenses

Fees of Vakil

Tax

Other litigation and court expenses

Other

Total

Miscellaneous Expenses.

Barber

Washerman

Sweeper

Servant

Toilet

Help to relatives

Cinema

Other recreation

Postal expenses

Books and periodicals

Travelling Expenses,

PART III.
PRODUCTION.
CHAPTER IX.
(GENERAL).

Importance of Production.—The ultimate aim of all human activities is the achievement of happiness. Economics as a study of man predominantly as a social being, is specially a fruit-bearing science. The aim of true Economics is to increase the total fund of human welfare in its own way and not to reduce it. This social aspect of all knowledge should never be lost sight of. Now, for human happiness, a man requires different wants to be fulfilled. All of them are not the subject of study from an economic point of view. The totality of man's happiness is many sided but satisfaction of economic want has an undeniable importance. It is a fact that man cannot live and does not live by bread alone. But it is also a fact and a more basic fact that he cannot live without bread. Therefore, Economics is integral to human happiness. And importance of production in the study of Economics is also equally integral. The circle of economic life has been correctly defined as that of "wants, efforts, and satisfaction." We cannot satisfy our wants without making efforts in that direction. Satisfaction of wants is also not possible without there being the necessary things with which to satisfy them. To supply these things in the form in which they can satisfy human wants is the function of production. Hence the importance of production is obvious. Our knowledge of every day affairs provides us with a large number of examples which well demonstrate the truth of this statement. It is a fact that human happiness cannot be measured in direct proportion to economic well-being because there are other constituents of happiness also. But we also know that a nation sunk in poverty and without facilities for leading a civilized standard of living can also never achieve happiness. Who can deny the fact that to make the life of an Indian peasant happy the first and the foremost thing required is to improve his economic condition? The same thing holds good for the nation as a whole also. It is proved without doubt, therefore, that production is of great importance. And to admit the importance of production is certainly not to deny the equal importance of other departments of Economics.

Meaning of production.—The first thing in the study of production is to understand its meaning in the sense the term is used by economist. Every day use of the term production is different from one which we make in economics. Ordinarily production is understood to mean agriculture, manufacturing,

mining etc. and is distinguished from trading which is called distribution. In economics, however production is used not in this narrow sense but in a wide one which includes production and distribution as popularly understood. Another point to be kept in view while defining production is that production does not mean bringing into existence any new matter. Our knowledge of science provides us with this information that the total amount of matter found in this universe can neither be increased nor decreased. Matter in this sense is indestructible. Therefore, production cannot mean production of new matter. In Economics all that we mean is creation of utility or so changing or adopting the already existing matter as to fit it for satisfying a particular human want. Production therefore has been rightly defined by economists as nothing else but creation of *new utility*. Because what production is, except adopting through human effort the materials and forces that nature provides to human use? On the one side we have our wants. On the other side we have forces and materials given to us by nature but existing in a form that are of little or no use to us on the satisfaction of our wants. Our problem is the problem of adopting the latter to the former. Human effort does this work which is called production. In the end therefore we can define production in economics as creation of new utility in the already existing matter with a view to adapt it for the satisfaction of a particular human want.

There is one more point that should be made clear in this connection. When we speak of production and consumption in economics as distinguished from each other we should not think that this distinction is objective and classificatory. It means that the same activity can be, from different points of view, called an activity of production as well as that of consumption. For example a carpenter when making a table is said to be engaged in an activity of production. But the more scientific way of saying would be that the carpenter from the point of view of the table is engaged in an activity of production but, from the point of view of wood and other material that he makes use of, is engaged in an activity of consumption. Thus logically production and consumption are merely two different aspects from which the same activity can be looked at. It is, therefore, correct to say that every activity has this double aspect. From practical point of view, however, we give a particular activity the name it deserves from the view-point of its more predominant aspect. Thus the activity of a carpenter is called an activity of production and not of consumption.

Different kinds of Utility :—While defining production we have said that it consists in the creation (new) of utility. The creation of utility can take place in a number of ways. Generally the following forms of utility are recognised. (i) *Form utility*, By this is meant that kind of utility which is created through a change of form of the already existing matter. An illustration would make the point clear. When a carpenter makes a table from a piece of wood he does not create any new matter which he cannot also do. All that he does is that he so changes the form of wood as to give it greater utility than before. Similarly all manufacturing industries as well as agriculture and mining also come under this class of production. (ii) *Place Utility*. Sometimes there takes place creation of utility as a result of changing the place of a commodity. For example sand in a desert may have no utility but when it is transferred, say, to a Geographical museum to distinguish it from other kinds of soil, its utility is greatly increased. Creation of utility in this way by transporting a commodity from a place of abundance to that of scarcity is known as place utility. We have a good example of this kind of utility in times of famine when grain is sent from relatively plentiful areas to those of scarcity. (iii) *Time utility*. In certain cases passage of time also results in increasing the utility of a commodity. It is a well-known fact that old wine is always more priced than fresh wine. Similarly when the agriculturist stocks his grain at the harvest time and takes it to the market afterwards, does it in the hope that by mere lapse of time the utility of wheat would be increased. (iv) *Service utility* is also created through rendering personal services. Such personal services as those of domestic servants to their respective employers, of professors to their students, doctors to their patients, musicians and dancers to their audience would come under this category. The nature of this kind of utility is that it is not embodied in any material object. Some writers mention besides these four kinds of utility, two more. (v) *Possession utility*. It is said to occur in those cases where possession of an article is transferred from a person having less utility for it to a person having more. This distinction of utility is in many cases however unnecessary because it can be covered by what we have called place utility. Transference of possession in most cases would involve transference of place also (vi) *Knowledge utility*. It is said to consist of that kind of utility which is created through the impartation of knowledge. Advertisement which gives information to the prospective customers about the things advertised is placed under this class. It is of doubtful value to give this kind of utility also a separate name because such utility as created by advertisement may be classed under the already mentioned service utility. Those who

engage themselves in the work of advertising goods render a kind of service to their employers particularly and the public generally.

The above discussion show that creation of utility which means in economic terminology production can take place in a number of ways and persons belonging to such different classes as those of carpenters, blacksmiths, businessmen, professors, doctors and agriculturists can all be called producers in the economic sense.

Factors and Agents of Production — Production in the sense we have used it is the result of the co-operation of a number of factors. The two elemental forces in the universe are man and nature, the former being an active force and the latter a passive one. Therefore all production is the result ultimately of the co-operation of man and nature, both acting and reacting upon each other. But besides these two basic factors of production, there are two others that are recognised by all modern writers on economics, one being called capital and the other organisation. Thus we have four factors of production classified as under : (i) Land-nature. (ii) Labour (work), these are the two fundamental factors as already said. (iii) The third factor is capital. It is the result of past labour as applied to land. (iv) And organisation is the last factor. It is nothing else but labour of a special nature. Let us now discuss their respective meanings.

Land.—In economics the term land has a different meaning from that given to it by a layman. Ordinarily land signifies the surface of the earth. But in economics the term land is used in a much wider sense. It refers to all free gifts that nature provides to man. Marshall has defined land in the following words. "By land is meant the material and forces which Nature gives freely for man's aid, in land and water, in air and light and heat" thus land would include every thing on the surface of the earth as well as above and below it. It would include within its category such things as surface of the land, rivers and oceans, mineral resources, climatic conditions and vegetation resources as well as other resources provided freely by nature.

Labour.—Labour in economics means every kind of human effort, mental and physical undertaken to create utility in matter. Adaptation of material and forces of nature in such a way as to make them fit for human use requires some human effort which is given the name 'labour' in economics. "Labour" (wrote Mill, is the creation of utilities by the application of man's mental and physical powers to the physical use, which furnishes materials and forces." One important

point to be noted in this connection is that labour is not a factor of consumption but of production. Hence an activity when looked at from production point of view only is to be called labour and not otherwise.

Capital.—Application of human effort to land results in the production of what is called in economics wealth, this wealth can be used either for the so called purposes of consumption or of production. When wealth is used for the latter purpose it is given the technical name, 'capital.' More logically speaking even this division of wealth into consumption-goods on the one hand and production-goods (capital) on the other should not be taken to be objective and classificatory. What is meant is this that whether a particular wealth is to be called capital or not will essentially and scientifically depend upon the way in which we look at its use. The use of the same article, to make the point more clear, from one point of view may be called as one of the nature of capital and from the other of that of the consumption goods. The instruments and tools that a carpenter uses in manufacturing furniture should be classed as capital only when we look at their use from the furniture-manufacturing aspect. Similarly to take a case of more extreme nature, logically we will have to class even our kitchen utensils as our capital goods when we view their use from the cooking aspect. Classification of such petty things as kitchen utensils under the heading capital goods may appear a bit unusual but logically that is the only correct position. The point that is to be emphasised is that capital is a factor of production and wealth when we look at its use from the point of view of production or creation of utility must be called capital in economics.

Organisation.—Organisation is the fourth factor of production which has come into importance in modern times particularly. Its function is to so co-ordinate the different factors of production including itself as to achieve the maximum of result with the minimum of effort and sacrifice.

Enterprise.—Enterprise should also be regarded as a separate factor of production. Its function is to undertake risk without which no work of production especially in modern times can be carried on. In every work that is done there must be some one who will gain by its success and lose by its failure. This is the function that an entrepreneur in modern times performs. And the service that he renders is known as enterprise. He is the man ultimately responsible for the whole work.

Sometimes a distinction is made between factors of production and agents of production. Land, labour, capital organisation and enterprise are called five factors of production and

the parties providing these factors of production are known as Agents of production. Thus land-lord who provides land, labourer who provides labour, capitalist who provides capital, organiser who provides organisation, and entrepreneur who provides enterprise are the five agents of production. In the opinion of the author this distinction between factors and agents of production is useful and must be adhered to.

CHAPTER X.

LAND

Its meaning and Importance.—In the last chapter we have already discussed the special sense in which the term land is used in economics. No useful purpose will be served by repeating it again. The only point that is to be remembered is that all materials and forces of nature freely provided to man when looked at from production point of view would come under the category land. Land is thus a factor of production. When free gifts of nature are, therefore, to be looked at from the consumption point of view they cannot be called land. The importance of land as a factor of production is also great. If it is a fact that mere human effort unaided by materials and forces of nature can do nothing then the inevitable importance of land is also a fact that no one can deny. It is why land has been called one of the primary factors of production. We may think of production either in the field of agriculture, or industry, or trade we will find that land in one way or another is one of the essentials without which nothing can be done. In agriculture it is land in form of the surface of the earth with the amount of heat and light enjoyed by it which is responsible for the great variety of agricultural products that humanity uses. Similarly it is difficult to think of the modern industrial production of the world without the use of different kinds of mineral resources which come under the category land. And who can think of the world-wide trade of our times without the aid which nature gives to man in form of wide oceans and seas? To sum up then we can say that the importance of land as a factor of production cannot be over-emphasised.

Characteristics of Land.—Land as a factor of production is said to possess a number of characteristics.

(I) *Free gift of nature.*—The first characteristic of land is that it is not the product of human effort but a free gift of nature. Thus it possesses no cost of production.

(II) *Fixed quantity.*—Another feature of land is that its quantity is fixed by nature over the supply of which man has no control. So far as agricultural land is concerned this fixity of quantity is true in relation to the area of land as well as to certain original and indestructible powers of the soil. It does not hold good of land's fertility which however is capable of increase or decrease through man's effort. Similarly mineral resources under the surface of the earth are also a fixed quantity.

(III) *Indestructibility of Land.*—A third feature of land is its indestructibility. Though it is a fact that there are certain

properties of land (agricultural) which increase or decrease with the passage of time or its use, there are others also which are not affected by any of these factors. For example, it is common knowledge that the surface of the earth has existed in the present form for lakhs and crores of years without any change.

(iv) *Stability*.—A further characteristic of land is its stability or lack of portability. It means that land cannot be transferred from one place to another. Its situation is once for all fixed and man has to move to it in order to make its use in any work of production.

(v) *Passivity*—The last point about the characteristic of land is its passive role in the act of production, man playing the active and directing part. This, however, should not be misconstrued to mean that passivity implies relative unimportance. Man and nature both are equally inevitable as factors of production, the only difference being in the respective roles they play in production.

Productivity of Land.—When we speak of the productivity of land, our attention is particularly diverted to agricultural land. Let us, then, examine the various factors that affect the productivity of agricultural land. The degree of the productivity of agricultural land in the main depends upon the two factors of its fertility and situation. So far as the factor of fertility is concerned it can further be attributed to a number of causes. There are, first, some physical and chemical properties which are inherent in every plot of land and on which its productivity to some extent rests. For example the texture of the soil should be such as neither too hard to allow the roots of the plant to go deep into it or to allow water a fairly free passage, nor it should be too soft to afford water too free a passage so that the plant food is washed away as soon it is put into the soil or formed therein. Similarly the soil must have the necessary chemical properties in the form of such inorganic elements as nitrogen, lime etc. Secondly, fertility of the soil is also dependent upon the amount of heat, light and moisture that a certain area of land surface gets in a given time. Lastly, there is also the factor of human effort. Man by his knowledge and labour can do a lot to improve the fertility of land. He can remove the deficiency of water by means of artificial irrigation as we find in the case of the Punjab and Sind. Excess of water can be removed by improving the system of drainage. Artificial manuring by making up certain deficiencies of land goes a long way in adding to its fertility. By improved means of communication he can annihilate distances. Thus human effort made in improving the land is also a great factor in determining its fertility.

So far we discussed the fertility of land. But situation is also very important. A land very fertile but situated very far from the market would lose much of its value, and good situation would make up to a great extent the factor of relatively less fertility. Thus nearness to market and better access to it as a consequence is also very vital in determining the productivity of land.

In determining the productivity or value of land the relative importance of fertility and situation will vary with crop to crop. In cases like those of fruit production situation has a very predominant part to play, though fertility is no less important. But in case of the produce that can bear long-range transportation without any deterioration in quality, the relative importance of fertility is great. Similarly in the determination of fertility itself the original and inherent properties of soil are sometimes more important and sometimes less important than the artificial that are the result of human action. For example in the production of such articles as fruit, vegetables and flowers human effort counts for much more than it would do in the case of ordinary agricultural products like grain and pulses, and in case of grass and forest trees the importance of human effort is the least.

In the end, then, we come to this conclusion that the productivity and therefore the value of land depends upon fertility and situation, their relative importance varying according to circumstances, and so also in the determination of fertility the original and artificial properties of the soil count for more or less from crop to crop.

CHAPTER XI.

LABOUR.

Definition.—We have already pointed out in the first chapter the vital importance of labour as a factor of production. The most popular definition of labour is that quoted by Marshall. He says "we may define labour as any exertion of mind or body undergone partly or wholly with a view to some good other than the pleasure derived directly from the work". In this definition the first point that deserves our attention is that labour includes both kinds of exertion physical and mental. The second point that emerges from the above definition is that labour is that which is undertaken with a view to achieve a good other than the pleasure which results from labour itself. In simpler language it would mean that the object of labour must be something else than the pleasure derived from it. This is meant to exclude such activities as are undertaken for their own sake. For example, when a student plays football for no other reason except the pleasure that the playing of football gives him, his activity cannot be regarded as labour in the economic sense. But a more correct definition of labour would be "Every human effort, physical or mental viewed from the production (creation of utility) aspect, is labour". According to this definition a student when playing football also undertakes 'labour' in the economic sense when we look at his activity from the point of view of the utility that he creates through playing that gives him satisfaction also.

In the definition of labour there is, however, one more point which is not mentioned in the above definition that Marshall has given. The point to which we refer is that labour is a factor of production and not of consumption. Hence exertion of mind and body looked at from production point of view only should be regarded as labour. Thus "human activities of every sort, intellectual as well as physical which have economic significance", cannot come under the category of labour. There can be activities viewed from consumption point of view also, which will have full economic significance but which cannot however be called labour in the economic sense.

Productive and unproductive labour.—What labour is productive and what is unproductive, has been the subject of much controversy with several writers on economics. For example, according to the Mercantilists the activities relating to foreign trade which resulted in large imports of gold and silver into the country were regarded as the best of all occupations. This was obviously because they prized gold and silver very much and thought that it was on the quantity of these

two metals that a nation possesses that its prosperity depends. Another school of French economists known as Physiocrats regarded agricultural labour only as productive and considered labour of all other types including that of merchant and other professionals as unproductive. This was so because they had a very peculiar conception about productiveness. Anything which did not result in any material production was not considered by them as productive. And because agriculture only appeared to them as yielding some substantial result in the form of material product, they called it a productive occupation, and designated every other kind of occupation as sterile. It is not difficult for us to appreciate now how crude was the conception of this class of economists so far as the idea of productivity is concerned. Adam Smith broadened the conception still further and all labour that resulted in "vendible commodities or material goods" was considered as productive. In this category were included not only the normal labourers but other workers also who directed and supervised the work of manual labourers such as the foreman, the engineer, and the manager. Still there was left outside the scope of productive labour a long list of workers, such as domestic servants, musicians, teachers, lawyers, doctors etc. who performed direct personal services. A little thought would convince the reader of the illogicality of these conceptions of productive labour which confined it to material production only. Thus the labour of a printer of the book would be considered as productive but not of the teacher who would make use of it. Similarly, the labour of an opera-singer was unproductive as it did not produce anything material but the producer of a musical instrument whose value depended only on its being used by a musician was classed as a productive worker. Such were then the inconsistencies to which the concept of productive labour as advocated by earlier economists led. The modern view of productive labour has no place for such illogicality and inconsistencies. It looks upon all labour as productive provided it results in the creation of utilities of whatever kind, irrespective of the consideration whether it results in the production of any material object or in the rendering of a service only. The only scientific criterion to be kept in view is whether there has taken place the creation of a utility or not. Thus only that labour would be classed as unproductive which ultimately fails to achieve the purpose it has set before itself. For example suppose a band of workers decided to build a bridge over a river but in the end it is discovered that they failed in their attempt. Obviously then their labour has gone waste and is to be called as unproductive. From this it also becomes clear that whether a particular labour is to be classed

as unproductive or not would be decided only after the result achieved by that labour has been known.

There is one more point that needs mention in the explanation of productive labour. The productiveness or otherwise of a particular labour has nothing to do with the fact whether the labour is considered to have been used for a moral or socially useful purpose or not. For example, the labour of a teacher from an economic point of view is as much productive as that of a producer of a bomb because both of them result in the creation of utilities though their social effects are very different from each other. Similarly, it has also to be kept in mind that for a particular labour to be classed as productive, it is also not necessary that it should enter the circle of exchange. The labour of a washerman who sells his services is as much productive as of the house-wife who washes clothes of her own children, no matter the services of the latter are not sold and purchased in a market. In the end then we are driven to the conclusion that all labour that results in the creation of a utility that gives satisfaction to a given want is productive without any further distinction of its kind or class.

Characteristics of labour.—Labour as a factor of production possesses certain characteristics which we do not find in the case of other factors. (i) The first characteristic of labour is that it is inseparable from the labourer. It is not necessary for the owner of either land or capital to personally go to the place where his land or capital is used as a factor of production. Thus the landlord is not bound with the land that he owns, nor the capitalist is bound with the capital. But in the case of labour the position is quite different. The seller of labour has personally to go to the place where his labour is to be used for the purposes of production. You cannot purchase the labour of a factory worker and use it in production unless the worker himself goes to the factory to work. It is in this sense, therefore, that labour as a factor of production is not separable from the labourer. Consequently the seller of labour unlike the seller of land and capital is interested not only in the price that would be paid for the labourer but also in the conditions of work and the types of associates he would have to work amidst. (ii) The second important feature of labour consists in its highly perishable nature. If a worker remains unemployed for a certain period of time the loss of working time so suffered can never be made up. It might be possible for him to overwork himself to compensate for the loss incurred during the time of his unemployment for a day or so, but this cannot go to any great extent. And in no case a man can save his energy by not for a certain time. If I have remained unemployed.

say, for a day, it does not mean that I have saved so much of my energy which I can spend the other day. Therefore the fact remains that labour which remains unused during a particular time is wasted for its owner permanently. Therefore labour is rightly regarded as the most perishable commodity. (iii) Another characteristic of labour is that its supply is not easily adjustable to demand. For example if the demand for a particular class of labourers goes up its immediate effect would be a rise in their wages because to increase their supply all of a sudden would not be possible. Of course this difficulty of adjustment of supply to demand is not of the same degree in the case of all classes of labour. For example, unskilled labour is relatively more adjustable but labour of a specialised kind is not so. And the total size of the working population of a country is the final limit within which such internal adjustments are possible, because to increase the total working population of a country even when there is an increased demand is not a question of short period. And just as increase in supply is not easily possible to meet increased demand, similarly decrease in demand also cannot be easily adjusted by decreasing the supply. The labour would prefer low wages due to reduced demand to going without work altogether. (iv) Relative immobility of labour is its another feature. Movement of labour from one place to another and from one industry to another for various reasons of sentiments etc. is always more difficult than it is in case of land or capital. The fact that labour is not separable from labourer is also responsible for this relative immobility. (v) Another characteristic of labour is that investment once made on it can never be recovered by the investor. If I spend say hundred rupees in purchasing a typewriter which after sometime I find of no use I can recover my investment by selling it. But suppose a person spends a few thousands of rupees in training his daughter in the art of painting and afterwards it is discovered that the money would have been better spent in training her in the art of music, yet the investment already made can in no case be recovered. (vi) The last point to be mentioned in this connection is also closely allied to the previous one. It is labour's characteristic that generally the person who makes the investment does not get the return as it happens in other cases. For example it is the parents who make investment over the education of their children but the reward is reaped by the latter and not the former.

// Efficiency of labour.—Before discussing the various factors that affect the efficiency of labour it is necessary to understand its meaning. In one sense efficiency of labour means the inherent and acquired capacity of the individual worker

But the term efficiency can be understood in a wider sense also. Thus in determining the efficiency of labour we might take into consideration the comparative view-point. In this case the payment made to the labourer is also to be kept in view. For example if one labourer produces eight caps per day and is paid one rupee as his wages, and another labourer produces sixteen caps per day and is paid only one rupee twelve annas per day, then it is clear that relatively speaking the second labourer is more efficient than the first one. The term efficiency can be interpreted in a still different sense also. In this case the efficiency of labourer would depend not only on his individual capacity or his efficiency relative to his cost but also on the way the work of production is organised. A labourer working in a factory with a better co-ordination and organisation is sure to prove more productive and therefore more efficient than while working in another factory less efficiently organised. Thus the term efficiency can be understood in any one of these three senses. For the present we shall discuss only those factors which affect efficiency as understood in the first sense, *i. e.*, efficiency depending upon the individual capacity of the labourer.

Factors affecting efficiency of labour.—The efficiency of an individual labourer depends upon his physical, intellectual, and moral capacity. It may be either the result of inherent qualities or of acquired ones. By our every day experience we know that some persons are inherently more healthy, more intelligent, and more moral than others. Naturally, other things being equal, such persons are bound to be more efficient than others. Therefore, in the determination of the efficiency of an individual worker his or her natural qualities play quite an important part. But training of mind and body as well as condition of life and work also matter a great deal in this respect. These factors affecting the efficiency of labour are many and various and may be classified as under.

(i) **Health of the worker.**—It is a self evident truth that the efficiency of a man depends on good health. Health in its turn is again determined by a number of factors. (a) The type of food one gets is important from the view point of one's health. Those people who on account of either poverty or ignorance do not take a well balanced and nutritious diet never possess good health which is always a great hindrance in their efficiency. (b) Sanitary and healthy conditions of living and work also affect the health of persons. Dirty surroundings which are breeding grounds of all kinds of diseases always produce an adverse effect on the health of those who live amidst them. (c) The climatic conditions of the place where one lives have also a great influence on the physique of the person living therein. We all

know that cold climate is more conducive to health than the hot climate. It is why we find that a Punjabi is much healthier than a Bengali. (d) Nature of work also has much to do with the physique of the worker. Those like the agriculturists who have to work in open air and natural surroundings keep definitely better health than those who have to work in the unnatural conditions of a modern factory or a mine. Similarly people carrying on sedentary jobs as of teachers or professors also do not keep that robust health which we find in the case of other persons engaged in other kinds of work. But it must be remembered that lack of such robust health is no hindrance in the work which such people have to perform.

(ii) Intellectual capacity of the worker—The efficiency of a worker also depends upon his general, and special intelligence. By general intelligence we mean such qualities as understanding, easy grasp of situation and a well developed common-sense. All these qualities are the result of man's intellectual development which takes place as the result of liberal education and hence provision of minimum of education for every citizen is an essential condition of efficiency. We find that uneducated people, whatever the type of work they are entrusted with, always do it less efficiently than the educated. Special intelligence or skill is also an important condition of efficiency. This is the result of special or technical training given to the worker. To take a few illustrations performance of such technical work as of engineers or of doctors is not possible without necessary training. When we say that education is necessary to improve the general intelligence of the worker which in its turn will improve his efficiency our reference is not to book learning only but to education in its most comprehensive sense which contributes to the development of all the latent faculties of a person

(iii) The moral strength of the workers —The efficiency of a worker to a great extent depends upon his moral sense also. Those persons who possess a greater sense of duty and responsibility are always more efficient than those who lack in such qualities. The moral sense of the worker in its turn is determined by a number of internal and external factors. It is a fact that some men by their very nature possess a greater sense of responsibility and duty and they always do their best while doing the job that is entrusted to them. There are however persons of a different type also who are from their very nature irresponsible and carefree and their tendency is always to avoid inconvenience and strain and follow the line of least resistance. Such men can never be expected to put their heart and soul in the work they do. The moral sense present in a worker can however be developed by favourable conditions of work also.

It is a matter of common knowledge that under the existing system of capitalist economy in which there is always an attempt on the part of the millowners to keep the wages of labour at the minimum, the labourer cannot feel any sense of identification with the work that he does. The logical consequence of this is that his efficiency suffers. His sense of responsibility and sense of duty are dulled and he feels little impetus to contribute his best in the work of production. The type of behaviour that the employer metes out to the labourer also goes some way to mar or make the enthusiasm of the worker. A sympathetic sweet tempered master can always extract better work from his employees than an unsympathetic and ill-tempered one. General education also helps the development of moral sense in a worker.

(iv) Hopefulness, change and future prospects — Besides the above factors the efficiency of a worker is also affected by such things as freedom to work at his own initiative, a sense of hopefulness and opportunity for change. It is generally seen that when a person gets tired and feels monotonous by continuous working a little change by going to a pleasure trip or even by taking rest would be of great help in removing his sense of fatigue and monotony which mar his efficiency. Similarly when a man knows he has good future prospects, his desire to work to the best of his capacity is greatly strengthened. Optimistic mood and a sense of hopefulness are also of great importance in determining the efficiency of man. A man who is over-burdened with anxiety and a sense of pessimism can never bring to bear upon his work that concentration of attention which is an essential condition of efficiency.

(v) Racial factor — Generally it is argued that race has also some effect on the efficiency of a worker. It is a common argument put forth by western writers that people belonging to white race are more efficient than those belonging to Asiatic stock. The stigmatization of Indian labour on the ground of racial characteristics also is a well known fact. But truly speaking race factor is something that has no reality. First, recent scientific researches have definitely proved that purity of race does not exist anywhere in the world today. Hence to base differences of efficiency on supposed racial differences is absolutely unwarranted. Then practical experience for example in India has clearly proved that given suitable conditions of work Indian labour can be as efficient as any other labour in the world. Hence to speak of race as a factor in efficiency is hundred and one per cent. nonsense.

The above are then the factors which influence an individual worker so far as his individual capacity is concerned.

The organisation of labour which also is a factor in efficiency shall be discussed in the following lines.

Division of labour.—It has been already said that the way in which labour is co-ordinated and organised also influences its efficiency. Division of labour is important from the point of view of organisation of labour. Let us then discuss division of labour at some length.

(i) **Its meaning and importance.**—The meaning of the term division of labour is not difficult to understand. When any work taken as a unit is done jointly by two or more workers it is a case of division of labour. If we examine the development of the economic life of man through his long history we will find that since times immemorial division of labour in one form or other has existed. In fact in one sense the work of progress in man's civilization has been the extent to which division of labour has prevailed. The higher the pedestal of progress to which mankind has reached the more complex is the division of labour that we find. Division of labour can be said to have begun in those primitive times when for the first time exigencies of human life made it necessary for man and woman to agree to a division of work best fitted to their respective situations, the former taking the outside responsibility of killing the game and the latter taking the domestic responsibility of looking after the home and the children. After this primitive economy when man advanced further in civilization the division of labour also became more advanced. We reach a stage where independent craftsmen begin to follow their respective professions and we find "The potter, the blacksmith, and the weaver devoting the whole of their time and effort to their own trade, relying on other craftsmen for the hundred and one necessities of their existence" From this stage of handicraft economy with the simplest kind of division of labour man further advanced to a higher stage of economic development known as the stage of domestic economy under which a number of similar craftsmen under the supervision of a master gather together and work in co-operation not for themselves but for their employer at a paid wage. This stage in the economic evolution of man was characterised by a new kind of division of labour wherein the work of organisation was no more left to the producer himself but passed on to the businessman. This domestic economy however was a transition to the new factory economy of our own times. And we know that the division of labour under this most advanced form of man's economic life has been carried to unthinkable limits. Today labour is divided not only in independent professions and crafts as of the carpenter and blacksmith, of the doctor

and the lawyer but has further been divided into processes and sub-processes of a particular craft. Side by side there has arisen division of labour of another kind also. Particular industries for various reasons have come to be localized in particular areas. Thus we have got what is called the territorial division of labour.

The above brief sketch of man's evolution in the economic field clearly shows that since the very days of primitive civilization division of labour has been an essential factor of man's life and its importance has progressively increased with the passage of time and in the present stage of our development the great importance of division of labour needs no emphasis. The whole civilization of today of which the modern man is so proud would be found tottering to the ground if the existing division of labour and specialization is ended from our social life, and humanity would be all the poorer for this change.

(ii) Advantages and disadvantages of division of labour.— Division of labour results in a number of advantages both to production as a whole as well as to the labouring population.

(1) The first advantage of division of labour is that it leads to increased out-put at less cost per unit. This is so because the greater is the division of the labour the greater are the chances of entrusting every process and subprocess of production to a specialist which must result in speedier production and reduction of cost.

(2) Another advantage of division of labour is that it facilitates the use of machinery. It is only after division of work has taken place into a number of simpler processes and subprocesses, that machinery can be used in production, and because division of labour is just responsible for this, its effect is further extension in the use of machinery. This extended use of mechanized production also results in its speeding up as well as in the reduction of cost.

(3) Improved quality of articles is another advantage of division of labour because every work is the result of a specialist.

(4) Economy of tools and time is a further point in favour of division of labour. The greater is the division of labour the less is the necessity for an individual worker to change his tools which means that time spent in such a change over is saved on the one hand and tools, which would have otherwise remained unused during the time other tools are in use, do not remain.

(5) Division of labour also helps in new inventions and discovery of new processes of work. When a worker's whole

attention is concentrated on a small process, there are greater chances of his suggesting new improvements in doing it.

(6) Division of labour by helping extended use of machinery and new inventions and by reducing the cost of production and therefore the price of the goods produced also encourages new employment and opens new opportunities for work. Thus the total production of the community increases.

So far we have discussed the advantages of division of labour from the point of view of production as a whole. We shall now examine its beneficial results from the point of view of the labour also.

(1) Improvement in skill is the one advantage that accrues to labour from division of labour. When a labourer repeats a part of the process again and again it is only natural that his skill and dexterity must increase as a consequence.

(2) Another advantage of division of labour from the point of view of a worker is that his time and effort in learning a trade is saved. The reason is that under a system of division of labour, the worker has to learn only a part of the trade and not the whole of it.

(3) Because division of labour promotes the use of machinery, it also results in reducing the strain of the worker.

(4) With the division of labour the processes of production are simplified. Therefore it becomes easier for a labourer to move from one occupation to another. Partly on account of similarity of work to be done in different occupations when division of labour has gone to a great extent, and partly on account of the ease with which new and simpler work can be learnt in new trades mobility of labour is encouraged.

(5) Economy of skill is a further advantage of division of labour to a worker. Every worker is given the job he can best do. The skilled worker is relieved of unskilled work which the unskilled labourer performs. This results in economy of skill.

(6) Lastly the ability and inventiveness of the worker also increase as the result of division of labour, because he gets the opportunity to concentrate his full attention on a particular process only that he repeats over and over again. It thus becomes easier for him to suggest improvements.

We have seen that division of labour has a number of advantages. It also, however, possesses some disadvantages. From one point of view what are said to be the disadvantages of the modern system of factory production are also the disadvantages of division of labour, as the latter is an integral part of the former. We shall at this juncture, however, discuss

the disadvantages of division of labour from a narrower point of view, particularly the one concerning the worker.

(1) The first disadvantage of division of labour is that the worker loses his independent status as a producer. His job now is to do a part of the work only and therefore he ceases to be a full-fledged producer of a commodity. This means loss of independence also.

(2) Division of labour also takes away from the worker that sense of pride and responsibility which one feels when one produces the whole of the thing himself.

(3) Monotony resulting from repeating a part of the process again and again is a further disadvantage that results from division of labour.

(4) In one sense division of labour reduces mobility of labour also. A worker who has learnt nothing else but performing a single operation finds himself unfit to take up any new kind of work. This disadvantage is especially noticeable in the case of specialized labour. Over against this, however, must be set the advantage regarding mobility of labour which results from the existence of more or less similar nature of machine-tending performed in different factories.

To sum up the whole position we must conclude that though there are certain disadvantages for which division of labour has been responsible, on the whole its effect has been beneficial to mankind. The evils of modern industrialism of which division of labour is an essential part, are evils mostly of the system under which the modern industrialism works. And the future hope of humanity lies not in reverting to the old economy of bullock cart and giving up the advantages of scientific knowledge, but in changing the existing system in such a way that science may be harnessed to the welfare and service of humanity and may not be misused for its brutal destruction as is the case today.

Localisation of Industry.—Localisation of industry is just another name for territorial division of labour. It means concentration of industry in a particular locality. For example, there are several cases of localisation of industry in India. We know that the jute industry of our country is concentrated in the province of Bengal, the cotton textile industry in Bombay and Ahmedabad, the iron and steel industry in and around Jamshedpur and the leather industry to some extent in Cawnpore. We have similar cases of localisation of industries in other countries of the world. The cotton industry of Manchester, jute industry of Dundee in Scotland, the Woollen industry in England, and the cutlery industry of Sheffield, also

in England, are some of the well-known instances of localization in other countries.

If we examine the history of the rise of these various industries in their respective localities we shall discover the factors that have led to such a localization. These different causes of localization are classified by writers on economics under the threefold heading of physical causes, economic causes and political causes.

(1) **Physical causes.**—Under this heading come such factors as nearness to raw material, nearness to power and physical and climatic conditions. The jute industry in Bengal, for example, owes its existence to the availability of raw jute in the province. Similarly it is the existence of iron ore as well as of coal which is responsible for the rise of iron and steel industry at Jamshedpur. Physical condition as good situation, and better means of transport also determine the localization of industry. Favourable climate also sometimes plays an important part. For example, humid atmosphere is necessary for the cotton textile industry so that the yarn may not easily break. And it is this advantage of humid atmosphere which to some extent explains the localization of cotton industry at Bombay. Climate and physical feature also indirectly affect localization through their respective influences on the production of raw material or availability of fuel and power.

(2) **Economic causes.**—Nearness to market and adequate supply of labour are the two important economic factors. In many cases several industries crop up at certain places mainly influenced by the factor of nearness to market. It is because of this reason that industries like the dairy industry or the fruit growing industry are established in the neighbourhood of big cities. Similarly the existence of supply of labour in a particular area may be a cause for the rise *in that area of an industry* which would employ the already existing labour.

(3) **Political causes.**—Sometimes a factor like that of court Patronage also determines the localization of industry at a particular place. Thus the Muslim industry of Dacca and the silk industry of Murshidabad sprang up due to the patronage of the muslim rulers of those places.

(4) **Localization a cause in itself.**—Once an industry is localized at a particular place for one or more of the above reasons, then such a localization becomes a further cause in itself. And generally new firms coming in that line would establish themselves in the same locality. This is because of a number of advantages. Specialised labour and capital required by that industry is easily available which is an advantage for the new comers. Existence of subsidiary industries such as

those supplying necessary implements and machinery, or doing repairing work is also a further advantage. Then in some cases there takes place the specialization of means of transport and communication which however is a case of specialised capital only... Establishment of technical journals and of technical institutes also means a further facility because they help in the dissemination of technical knowledge and discussion of technical problems. Lastly the reputation and good-will that the locality comes to possess regarding its special product is also an advantage to the new comer. For all these reasons localization becomes a cause of localization.

Advantages of Localization.—Localization of industry produces a number of beneficial results which are not very different from those discussed in connection with division of labour and some of which we have already seen while discussing localization as a factor of further localization. These advantages relate to the availability of skilled labour, existence of subsidiary trade, development of specialised machinery, facilities of banking and credit and also to the economy of materials that would result particularly because of the utilisation of by-products.

Disadvantages of Localization.—As against the above advantages there are a few disadvantages of localization also. One such disadvantage arises because localization results in exclusive dependence of the economic life of a particular area on a single industry. Thus it is a well known fact that the prosperity of the people of Bengal to a great extent depends upon the prosperity of its jute industry. If for any reason the jute industry experiences a depression it would spell disaster over the economic life of the whole province including its trade and agriculture also. The only remedy to some extent can be the establishment of variety of industries. Another disadvantage of localization arises from the fact that one kind of industry gives outlet for one kind of labour only which means that labour of different kinds remains unemployed. To take an illustration the iron and steel industry offers employment for male labour only which means that the females and the children of the male workers would go unemployed. For this reason it would be necessary for the employers to give somewhat higher wages to their employees to make good the loss in earnings which their females and children would have otherwise made. Development of suitable subsidiary industries can help the mitigation of this evil to some extent. Localization of industry also has all disadvantages that ~~are~~ externalization of industry possess. Such disadvantages are : over-crowding in the cities, increased cost of living including increased house-rent, difficulties of transport particularly on certain days in the month and at certain hours of the day, wastage in bringing raw material from the

producing areas, and then taking the finished products to distant markets, and a number of other social and health problems which are a natural consequence of such a centralization.

Efficiency of an Indian Labourer.—Sofar we have discussed the problem of the efficiency of labour as well as the allied problems from a general point of view. We have seen the factors that affect the efficiency of a labourer from the point of view of his individual capacity. We have also seen how the organisation of labour affects the efficiency of labour. It would be advisable for us now to conclude this part of our discussion by examining the problem of the efficiency of Indian labour also.

The problem of the efficiency of Indian labour is nothing else but a special application of the general problem to conditions prevailing in India. Several writers on Indian economics start their discussion of the question of the efficiency of Indian labour with the patent but unjustified remark that Indian labour is inefficient. The objection to the statement is based not so much on grounds of existing facts as on the implication that the inefficiency of Indian labour is its inherent characteristic. In the opinion of some this efficiency is attributable to social factor. We have already pointed out that race is a historical myth and to make it a factor of efficiency is wrong. Therefore the first point that it is necessary to emphasise while discussing the efficiency of Indian labour is that there is nothing inherently wrong with Indians so as to make them inefficient workers. This however, should not blind us to the fact that at present the conditions prevailing in our country are such as make Indian labour comparatively inefficient.

The causes of the relative inefficiency of labour in India may be mentioned as under.

(i) **The poverty of the people.**—The outstanding fact of Indian economic life is the abyssmal poverty of our people. Ours is the poorest nation in one of the richest countries of the world. Because of this poverty the standard of living of the people is miserably low. They do not get an efficient diet to eat, a sanitary house to live in they have no facility for medical aid, recreation and amusement have no place in their life, and the net result of all these things is that their capacity remains undeveloped and they do not become as efficient workers as happier circumstances would make of them. It is also important to remember in this connection that poverty which is the cause of low efficiency is also its effect and thus the whole position is that of a vicious circle.

(ii) Lack of facilities for education.—The efficiency of labour also depends upon the general intelligence of the worker which is the result of general education. In India illiteracy reigns supreme on Indian labourer because of his being uneducated, he also lacks general intelligence. It produces an adverse effect on his efficiency. Education is also responsible for the development of such moral qualities as sense of responsibility and sense of duty. Indian labour lacks in those respects also.

(iii) Lack of Technical education.—This is another factor that explains the comparative inefficiency of an Indian labourer. He is in most cases an unskilled worker and the opportunities of specialized training are practically non-existent in our country. Better provision of technical education is therefore of urgent necessity in India to improve the efficiency of Indian labour.

(iv) Climate.—It is also argued by some that the hot climate of our country produces a bad effect on the efficiency of our labour. Accepting the statement that cold climate is more conducive to doing a work than the hot one as a general truth, we have also to remember that man adapts himself to the natural conditions in which he lives. And, therefore, the hot climate of the country is not any great hindrance in the way of putting forth hard sustained work which we find an Indian labourer doing. The modern scientific inventions can also help to a great extent in mitigating the rigors of an unfavourable climate. Use of electric fans, refrigerators and humidifiers etc are some of the artificial devices adopted for the purpose.

(v) Unsatisfactory working conditions and long hours of work.—These have also affected the efficiency of our labour unfavourably. In spite of factory legislation that exists in our country, we must admit that conditions in an average factory in India regarding ventilation, sanitation, and other things are far from satisfactory and naturally their effect on the labourers' efficiency is bad. Long hours of work are also a cause of our labour's inefficiency. Though recent factory Acts have done something to improve matters in this respect, yet the present condition needs further improvement.

(vi) Migratory character of Indian labour.—Because most of the factory workers in India are agriculturists first and anything else afterwards, they do not look upon factory work as their main occupation in life. They take to factory work to supplement their earnings from agriculture and naturally they are not at all keen about improving their efficiency nor it is possible for them to do so in view of their changing life between factory and farm.

(vii) Outlook of life.—Indian approach towards life is 'ionally other-worldly and the existing conditions of help-

lessness born ultimately out of our political subjection and also aggravated by it have made very pessimistic. Naturally the worker lacks that hopefulness and enthusiasm which are essential for all progress. Depressed conditions of living perpetuate pessimism which in its turn hampers our path to further improvement. And thus we move in a vicious circle to break which a violent shock to the existing order of things is now necessary.

The above factors explain the relative inefficiency of Indian labour. But under better conditions Indian labour has proved as efficient as labour anywhere else is a fact that has been proved by actual experience. Thus the problem of the efficiency of Indian labourer is fundamentally a problem of improving the conditions in which he is born, brought up and in which he has also to work. No inherent incapacity otherwise attaches to him.

CHAPTER XII.

POPULATION.

So far we have discussed the problem concerning the efficiency of labourer. But the total supply of labour as a factor of production depends not only on the efficiency of labour but also on its size. In this way the problem of population is integrated into the problem of production. In this chapter we shall discuss the question of population from this point of view. It should be remembered that the importance of discussing the population problem from the stand point of production of wealth is very great. The total amount of wealth produced in a country ultimately depends upon the total supply of different factors of production. At present, however, we are concerned with the supply of labour only. As already remarked the supply of labour in any country depends not only on the number of the working population in it but also on its capacity or efficiency, because the out-put that a worker can bring forth is not only a function of the time for which he works, but also of the efficiency with which the work is done.

The Malthusian theory of Population.—All discussions on the problem of population begin with the theory of population as enunciated by Malthus. Though the place of Malthus in this respect is undeniably of great importance, yet it would be incorrect to suppose that in earlier times the study of population did not receive any thought. However, we must start with the Malthusian theory of population. Malthus was an Englishman who lived in the 18th century. It was the time when England was passing through the period of industrial revolution. As the 18th century wore on to its close and the next century began, year by year the condition of the working classes in England became more gloomy. An astonishing series of bad harvests, a most exhausting war and a change in the methods of industry that dislocated old ties combined with an injudicious poor law, to bring the working classes into the greatest misery they have ever suffered. Thus the condition of the working classes in England at this time was very miserable. People naturally got interested in enquiring that, if population continued to grow as it was growing at that time, was there any possibility to stop the progressive degradation of the people? Malthus was the chief enquirer and it was in 1798 that his *Essay on the Principle of Population* was published. It was in this book that Malthus enunciated his theory of population which we shall now examine at some length.

The Malthus' theory of population may be studied in three parts. The first part concerns the supply of labour, the second is concerned with the demand for it and the third relates

to his conclusion about the future in the light of the past. Regarding the supply of labour, Malthus argues that the growth in the population of a country is always very rapid and continuous as the history of every people proves. In relation to the demand for labour, he maintained that after a certain stage is reached in the size of the population, the food supply of the land does not increase in proportion to the increase in its numbers. And as the demand for population is determined by the produce which nature returns to the work of man, the supply of labour always exceeds its demand. On the basis of these facts he also concluded that in future also the experience of the past must be repeated, that is the supply of labour in future also will exceed the demand for it. Thus the problem before Malthus was to equate the supply of labour to the demand for it. He argued that there are only two ways to reduce the supply of labour. One is the nature's method to check the growth of population through the exercise of what he called "*positive checks*." By these he meant such natural calamities as famines, epidemics and wars. When the population of a country would out run the means of subsistence, hunger and starvation will prevail in the people. Their health will deteriorate and their capacity of resistance to disease will decrease. This will naturally result in the spread of a number of diseases. Famines would also occur for the same reason. All this would mean an increase in the death rate. Similarly pressure of population in different countries will result in wars thus reducing the number of the people living. Malthus believed that when the population of a country would exceed the means of subsistence and people will not exercise any voluntary check to keep the numbers within limits, these positive checks would come in operation. Hence to avoid them and minimise the resulting misery of the people, he advocated what he called the "*preventive checks*." They consisted in the use of voluntary and prudential checks such as late marriages and moral restraint so that population may remain within limits. Malthus and other classical writers like Ricardo and J. S. Mill were, however, not very optimistic about the use of preventive checks and thus foreshadowed a gloomy future for society. It was the same pessimism of Malthus to which he gave a characteristic expression in the statement that he made that population increases in geometrical progression of 1, 2, 4, 8, 16 and so on, where as the food supply of a country increases only in arithmetical progression of 1, 2, 3, 4, 5, 6 and so on. It meant that within every twenty-five years the population of a country will double itself. This, in brief, is the Malthusian theory of population the essence of which lies in the principle that "population tends to outgrow the means of subsistence." This principle rests on the belief

that in spite of all possible agricultural improvements they would not prove adequate to meet the requirements of increasing population.

Criticism.—Malthus' theory of population has been subjected to much criticism by a number of economists of modern times. Let us now examine the extent of the validity of such criticisms.

One very common criticism mentioned against Malthus' theory is that actual developments have failed to support the gloomy prophesies that Malthus made about the future of society. We have seen that in the countries of Europe and America there has taken place a simultaneous increase both in population as well as in the standard of living of the people. Thus increase in population did not mean greater misery for the people as Malthus had prophesied. This was so because during the 19th century as a result of scientific inventions there took place great improvements in the methods of production. Now it is a fact that Malthus' pessimism about the future has not been justified, but it was no fault of Malthus that he could not foresee all these developments in the technique and consequently in the organisation of production. And, then, this change in situation cannot be said to affect the validity of his theory so long as his assumption remains true. Even to-day we find Malthus' prophesy being fulfilled in countries like India where for certain reasons the economic organisation of the country still continues in the medieval frame. So far as mere theory goes, the fact is that even Malthus was conscious of the favourable effect that agricultural improvement was expected to produce. His mistake, if inability to see into the future can be regarded a mistake by any stretch of imagination, was that he did not believe in the possibility of such improvements to any great extent.

Another criticism made against Malthus concerns his mathematical formula of Arithmetical and Geometrical progression. It is to be remembered however that Malthus' use of this formula was meant to indicate a general tendency and it is wrong to think that he attached any great importance to the phrase itself. "What he meant, stated in modern language, was that the tendency to diminishing returns which is assumed throughout his argument, would begin to operate sharply after a certain stage in the produce of land has been reached.

A more correct point of criticism made against Malthus is that he did not base his facts on one country only. About the 'w' of population he depended upon American experience about the increase in food supply he drew his facts from i. Thus he did not compare like with like which is

necessary because " population and food supply are to an extent interdependent, and the rate of increase in population is at least in part determined by the available food. The population of the United States increased as it did because food supply was capable of indefinite increase, whereas British food supply was not ; causing British population to increase more slowly.

Another point of criticism levelled against Malthus is that he over-rated the possibility of the future growth of population. The spread of the knowledge of contraceptives, education of females, increased standard of living are some of the factors which check the growth of population. It is also noticed that the higher is the density of population the lower is the future rate of its growth.

Another argument against Malthus is that the problem of population is not a problem of its size only. On the other hand it is a problem of the relative adjustment of population to the development of a country's natural resources. As Cannan pointed out, Malthus did not appreciate that increase in population meant increase in labour supply also which meant increased capacity to produce, thus Malthus and his followers made the mistake of thinking that increase in population is always bad. But the real point is that it is neither increase nor decrease as such which is either always good or always bad. The population problem also has to be viewed from a dynamic standpoint. In one set of circumstances increase in population may be good for economic prosperity of a country and in another set of circumstances decrease in population may be desirable.

Thus we find that the greatest flaw in the Malthusian theory of population lies in its static approach to the problem of population whereas the correct approach should be dynamic.

The optimum Theory of population —The above criticism of the Malthusian theory of population has led to the development of what is called the optimum theory of population. While discussing the factors of production we pointed out that man and nature act and react upon each other as a result of which production takes place. At any given time in a country there is a given quantity of fixed capital, a given technique of production and also a given stock of natural resources; and to maximise production it is necessary that there should exist in the country sufficient population to make full use of all these natural resources and capital under a given technique of production. This population is called the optimum population because it is the population which would give optimum results in production at a given time. It is implied here that optimum population is not a fixed quantity. It would vary with varying circumstances. The criterion of optimum

population is that it must result in highest income per head of the total population. There are certain writers who maintain that the idea of optimum population is of no practical value, because we can never say what is the optimum population in a given country at a given time. Exact measurement may not be of course possible yet the idea of optimum population is useful as a guide.

Population problem in India.—So far we have discussed the population problem in general. It would be advisable to make a few observations about the problem in India.

At the very outset let us mention some of the outstanding facts of India's population. The first point that would strike even a casual observer is about the continuous growth of population in our country. According to the figures of the first census held in the year 1872, India had a population of 206.2 million people. In 1931 it reached the figure of 352.9 millions and in 1941 excluding Burma it has reached the limit of 388.8 millions. The growth of population has been greatest during the last decade the rate of increase being 15 per cent. In 1921—31 decades the rate of increase was 10.6 per cent only. The total population of India is $\frac{1}{6}$ th of the world population and is greater than that of any other country in the world. We should not forget however that percentage increase in India's population in comparison to other countries has been small. For example, between the year 1872 to 1930 the percentage of increase in Germany was 60, Italy 63, Spain 44, England and Wales 77, Russia 115, Denmark 100, U. S. A. 125, Japan 113, France 14. The percentage increase of population in India in almost the same period (1872 to 1932) has been 30.7 only. Thus it is smaller than that of every other country except France. But that even a small percentage in a big country like India means a large increase in absolute figures, is a point that we should not forget.

Another important fact in the population situation of our country is that increase in population is generally greater in those parts where the density of population is already high. The average density of population in India according to 1941 census is 2.46. It is much less in comparison to that of a number of other countries as the following figures will show : Belgium 654, England and Wales 685, Germany 332, France 184, Japan 215, U. S. A. 41, Egypt 34, China 200. These figures lead us to another important conclusion that density of population is no index to the country's economic prosperity, the reason being, that density of population is determined by a number of factors. In India also we find that there is much

diversity in the density of different provinces ranging from the sparsely populated provinces of Baluchistan and Rajputana to the densely populated provinces of Bengal. The various factors affecting the density of population in our country are the physical features of the land, climate, rainfall, and the stage of economic development reached.

A third important fact of India's population concerns its distribution between different occupations. Agriculture is the one single industry in which an overwhelming majority of our population is engaged. The share of industry on the other hand is very small. Another unsatisfactory feature of this mal-distribution of population between different occupations is that the tendency of agricultural population has been on the side of increase, whereas in other countries the percentage share of population engaged in agriculture has diminished. In 1931, 73% of our population depended upon agriculture and there is no reason to believe that the situation in 1941 might have improved. A logical corollary of this is the predominance of rural population over town population ; 90% of our population lives in villages.

The last point that deserves notice regarding population in India is about its future trend. The net increase or decrease in the population of a country depends upon four factors, the birth rate, the death rate and the rates of immigration and emigration. In India the last two factors do not play an important part. It is only the first two factors which therefore have significance. So far as the birth rate in our country is concerned its one well known feature is its very high rate. Universality of marriage, early marriage, low standard of living, and practically no use of contraceptives are some of the important causes that explain the high birth rate prevailing in our country. Side by side the high birth rate we have a high death rate also specially in the case of infants and women. The poverty of the people, ignorance of health laws, lack of efficient and adequate medical aid, and cases of premature motherhood due to early marriages are responsible for this high death rate. Keeping in view however all the factors that affect the growth of population, there is a consensus of opinion amongst all the students of Indian population that the future trend of population of India is going to remain that of an increase. It is estimated that our population is likely to increase at the rate of 5 millions per year. Therefore the main problem of population in our country is that of checking this growth. We shall now discuss in brief what should be the rational policy about population in India.

The problem of a sound population policy for India. The question is generally debated whether India is over-populated

or not. If we look to the facts of the existing situation, we must come to the conclusion that the present standard of our national income is not at all sufficient to support even the existing population at a decent standard of living. And when we keep in view the fact of a continuous increase, the position appears to be all the more serious. But sometimes a contrary view is also put forth. It is argued that though the present national dividend is not adequate to keep the country's population in an efficient standard of living, if we take into consideration the vast national resources of the country and the possibility of their development on proper lines, it would be wrong to say that India is over populated. The element of truth in this latter view is that the resources of our country are really so far not fully developed and there is great need for their development which is bound to result in higher national income. The development of these vast resources of our country would also mean greater opportunity for our people to get employment. But even then after all reasonable allowance is made for such a development of our resources, it must be admitted that the only national policy regarding population of our country would be to check its growth. Because the already difficult problem of national reconstruction would become all the more difficult if the present tendency of growth in our population continues unchecked. It therefore remains for us to discuss the ways and means of checking the present tendency of our population to grow. Two different methods are advocated for this purpose by persons belonging to two different schools of thought. According to one school of thought to which leaders of public opinion like Mahatma Gandhi also belong, the most effective method of birth control is voluntary moral restraint. There is no doubt that the method of voluntary moral restraint is cent. per cent. effective. But there prevails much difference of opinion not only about its practicability but also about its desirability. It is sometimes argued with the sanction of medical opinion that prolonged voluntary moral restraint produces an undesirable effect on the health of the persons practising restraint. According to this opinion sexual intercourse is considered to be a physical necessity for an average and normal human being. Besides this it is also maintained that moral restraint in order to be effective must be complete because any single lapse may destroy the fruits of all past restraint and such a complete restraint is beyond the capacity of ordinary men. Admitting the force of these objections, we must not, however, forget the other side of the picture. It is also undesirable that complete moral restraint is unpracticable and the extremes of complete restraint or no restraint at all.

A middle course is not only practicable but also desirable and any attempt to seek sanction for laxity on grounds of practicability or desirability must be condemned.

The other method advocated by another school of thought is the use of contraceptives. The opinion in this respect is also greatly divided. From its ineffectiveness to its undesirability from the moral point of view, all kinds of objections are raised against methods of artificial birth control. The possibility of its use in India is greatly discounted for a number of reasons. The ignorance of the masses, the costliness of contraceptives, and conservatism of the people are some of the difficulties in the way of popularising the methods of artificial birth control in India. The absence of necessary clinics is also an additional factor. Production of effective and cheap contraceptives is also a great necessity.

In the end, therefore, we come to this conclusion that to check the further growth of population in our country not any one method would prove both effective and practicable. So far as possible voluntary moral restraint is the best thing to adopt. But there should be no objection to its being supplemented by the use of efficient and healthy contraceptives also and the existing difficulties in the way of their use by our people should be removed. In this respect the responsibility of both the Government as well as private public effort is great and cannot be over-emphasised. And in addition to these two methods, such social practices as late marriage, and postponement of marriage till well-established in life, as well as spread of female education, and improved standard of living, and a sense of greater responsibility towards children would also produce a wholesome effect on the growth of our population in future. In the end, however, we must not forget to stress the point that the solution of the population problem of our country as that of any other country would not be possible by the one sided attempt of restricting the future growth of the people; but an equally important aspect of the question is that of developing the natural resources of a country to their maximum capacity and also improving the existing technique and organisation of production, because without this double approach on our part, the problem would always defy all attempts at solution.

CHAPTER XIII.

CAPITAL.

Its meaning and importance.—In an earlier chapter we have already discussed the meaning which is given to the term capital in economics. We saw that from a logical point of view whether particular goods or item of economic wealth should be described as capital or not depends not upon the goods as such but upon the approach we make to it. Wealth (excepting land) when looked at as an aid to production is called capital in economics. In practical life however our classification becomes less logical though more useful. For example, there are certain goods as the clothes we put on, the furniture we use, the books we read, and the houses we live in, which we speak of as consumer's goods. On the other hand there are other goods like different kinds of machinery, factory buildings and raw material which are commonly known as capital goods. This objective classification of goods into capital and non-capital goods is based on the fact that whereas those belonging to the first class are predominantly meant for consumption purposes, those belonging to the second class are used for production purposes, when production and consumption are understood in a practical sense.

After defining the term capital, it would be also advisable to write something about its importance. Here we have not to forget that the term capital in economics refers to goods as such. If we view the development of man's economic life on this earth from a retrospective point of view, we will find that as he has progressed in civilization, this progress has been marked with greater and greater use of accumulated wealth in the work of producing further wealth. His dependence on unaided effort to produce wealth, on the other hand, has proportionately diminished. In the earliest stages of his existence man satisfied his hunger by plucking fruit from the trees with his own hands. He had no tools or implements to help him. Then came a time when he began to make use of implements of wood and stone to help him in the killing of the animals to satisfy his hunger. This process continued and as he progressed his implements and tools improved till we have reached the present stage of our development. The point that we have to stress is that man's progress and the use of capital have gone side by side. With the use of capital in the work of production an important result followed. It was that production came to be more and more round about. Thus we can say that round about production and production with the help of capital are one and the same thing.

The coming of the industrial revolution changed the technique of production and large scale production became the order of the day. With the development of large scale production the importance of capital also greatly increased. Production did not remain so simple now as it was in the past. It became a much complicated affair which called for vast amounts of investment in capital goods and which came to be carried on in anticipation of demand. Thus we find that capital as a factor of production has assumed tremendous importance in modern times.

Capitalistic production.—Before proceeding further in the discussion of capital it will be useful to distinguish capitalistic production from production with the help of capital. The term capitalistic production is used to indicate a particular system of economic organisation in which production is carried on for private profit and private ownership in the means of production exists. In all countries of the world with the exception of Russia the capitalistic system of economic organisation is found to exist. A common feature of capitalistic system of economic organisation is that factories and workshop with all the necessary equipment are owned by private individuals who are known as capitalists. They run those factories and workshops and produce commodities not from the point of view of their need to society but from that of their profit. It is rarely that society's need coincides with the interests of the capitalist. Therefore this system of economic organisation is fundamentally defective. A rival system of economic organisation is the socialist one. Under this system production is carried on according to the needs of the people and not for profit. There are no private capitalists who are owners of factories and workshops. It means, in other words, that private ownership in means of production does not exist. State as the representative of the society is the owner of all factories and workshops which means the existence of social ownership over means of production. The state produces only those things which are required to meet the consumption need of the society. Earning of profit has no importance. Now under the socialist system of economic organisation also, production is carried on with the help of capital as under capitalistic system. Thus the distinguishing feature of capitalistic system is not the use of capital in production which is found in socialistic system also. The distinction between the two systems lies in the way in which production is carried on and not in the means with which production is carried on.

Characteristics of capital.— We shall now discuss some well known features of capital:

(i) The first and the foremost point that should strike one while examining the characteristics of capital is that whatever be the importance of capital in modern times, it is not an indispensable factor. We can carry on production even without the help of capital though no act of production is possible without either labour or land. It is in this sense that we call land and labour as primary factors and capital a secondary factor. In the earliest stages of his evolution man fulfilled his wants through productive actions which involved no use of capital. He satisfied his wants with the help of labour and land only, for example when he lived on the wild fruits that he plucked from trees with his bare hands.

(ii) Another characteristic of capital is that it is the result of saved wealth or past labour. In the definition of capital we have already made it clear that capital means wealth when we look upon its use from the point of view of production.

(iii) A third feature of capital is its relatively greater mobility. This applies less to fixed capital and more to floating or liquid capital.

Land and Capital.—Sometimes the question is raised as to the desirability of treating land as capital. It is argued that the distinction between land and capital is unimportant from the view point of an economist. It is a fact that from the point of view of an individual it does not make any difference whether he invests his floating resources in purchasing either machinery or land both of which he proposes to use for purposes of production. It is also a fact that the price of land obeys the same laws of demand and supply which the price of capital does. Still we should not forget the fact that the problems that scarcity of land creates for society are very different from those created by the growth of capital. It is right that from the point of view of logic land and capital differ not in kind but in degree as far as the element of scarcity goes ; but this difference of degree is of great importance and therefore it is proper to treat them as two separate factors. We should also remember that land in the economist's sense in its origin is different from capital. Land is a free gift of nature whereas capital is not a free gift of nature in that sense. To say that the material out of which capital goods are produced is as much a free gift of nature as land is not to say that there is no distinction between the two. Land helps production in the form in which nature gives it to man. Capital on the other hand helps production and the form which it possesses is one that is given to it not by nature but by man. Therefore both in their origin as well as in their ultimate effects upon society land and capital are different and hence they must be treated as different factors of production from the social point of view.

Money and Capital.—Another problem that arises in the discussion of capital is, if money should be treated as capital or not. If we stick to the definition of capital that we have given, it should be clear to us that any thing to be regarded as capital must first come in the category of wealth. Now money in the strictly economic sense is not wealth. It is a representative of wealth in the sense that one who owns a particular amount of money has a right to command a certain quantity of wealth, the exact quantity to be determined by the purchasing power of money. Thus if money is not wealth logically it cannot be capital also. Just as in some cases it is representative of wealth we can say that in some cases it is also a representative of capital. This definition of capital confining it to wealth only is at variance with the commercial use of the term capital. We speak of a particular company or business having capital of so many rupees annas and pies. From a practical point of view the use of the term capital in this sense is both convenient and permissible. But when we look with the eye of an economist we should go deeper and treat as capital all those goods (wealth) which the money capital would purchase for helping the work of production. Thus it is not money that is capital but the raw material, the machinery and the building which money purchases that are real capital.

Credit and Capital.—Another question to be discussed in this connection is if credit is capital. In economics credit means confidence or trust that is placed in the probity of a man by one who gives him credit. The function of credit is to help the producer in his productive activity by giving him the right to use a certain amount of money when necessity for such a use arises. Thus credit enhances man's fluid resources. Looked from this point of view credit is the representative of money in the sense that it fulfils the function that money performs in the economic life of society. Now if money cannot be classed as capital because it is not wealth credit can also not be classed as capital for the same reason. All the same we should not forget that just as possession of liquid resources can be used for purchasing capital, similarly credit can also be used for the same purpose. We can therefore conclude that money and credit are not capital though they are helpful in obtaining capital.

Functions of Capital.—Capital is a factor of production. From this it is clear that the real function of capital can only be to help the work of production. This function capital can perform in a number of ways, for example, by the provision of raw material, machinery and other capital goods or factory buildings. Besides these functions, what is called money-capital also performs another important function of providing the

necessary liquid resources to the employer to bridge the gap which inevitably separates all productive activities from their results. It is a matter of common experience that every act of production must take some time to bear its fruit. For this gap somebody must wait. Now it is the employer who takes upon himself the responsibility of all necessary waiting. This he is in a position to do because he is provided with necessary money capital. This is therefore another important function that money capital may be said to perform. It mainly takes the form of making advance payment to labour and other factors of production by the entrepreneur. We know for example that labourers have to be paid their wages every week or fortnight, no matter within that week or fortnight the commodities which they have produced have been sold or not. In other words, the factory labourer is not going to wait for his payment till the sale proceeds of the goods produced by him are realised as a result of actual sale. The same thing holds good of other factors of production as well. Therefore money capital is required for all these advance payments which is therefore called an important function that money capital performs.

- **Kinds of Capital.**—The next point about capital is one concerning its classification. Capital has been classified from a number of view points. From one point of view capital can be divided into *fixed capital* and *circulating capital*. The term fixed capital is used, for those capital goods which are of a durable nature and which render services over a long period. In this category we include such things as machinery, factory building, and other equipment of durable nature. Circulating capital on the other hand is not of a durable nature. The service that it renders is exhausted in no time. In other words, it serves its end only once. In this category would be included for example the raw material of the industry, fuel used in production, lubricating oils and other things of a similar nature. A moment's thought would make the point clear to the reader. We know that in the manufacturing of cotton cloth raw cotton should be counted as circulating capital because a particular amount of raw cotton can be used in the work of production only once. On the other hand we find that a machine will go on rendering service for a number of years. Similar is the case, say, with oils or fuels used in manufacturing. Now from practical point of view this distinction is all right. However this difference between fixed capital and circulating capital is not a difference of kind but of degree. After all it is not a matter of fundamental difference that one kind of capital goods takes ten years to exhaust itself and another takes only ten years to exhaust itself. To fulfil its purpose time is a

necessary requirement in both cases, because even raw cotton or oil would take some time to be used fully. Therefore to distinguish fixed capital from circulating capital a more scientific basis is sometimes suggested. Fixed capital is said to consist of all those forms of capital which in the course of rendering service in an act of production do not become a part and parcel of the goods produced. From this point of view machine, oils and fuel all would come in the category of fixed capital. Then there are other forms of capital known as circulating capital which in the course of rendering service in an act of production also become a part and parcel of the article produced. Thus in the case of, say, a furniture manufacturing industry wood, nails and other fittings would constitute circulation capital.

Capital is classified also as *social capital* and *private capital*. All those capital goods which are useful from the point of view of the general welfare of the society should come in the category of social capital—whether they are owned privately or by society. While defining social capital in terms of social welfare it is recognised that this definition would raise a number of practical difficulties. For, what is social welfare and what is not social welfare can be a matter of extreme difference of opinion. For example socialists can very well argue that capital in a capitalist economy is not used in the interest of social welfare and therefore should not be classed as social capital at all. But such difficulties are inherent in all questions of valuations. In any case if capital is to be classified as social and individual the classification must be based on that definition of social and individual which is commonly recognised. Thus from the point of view of an individual, capital goods used in an ornament manufacturing factory may be classified as capital but from social point of view it would be wrong to call it capital. When we use social capital in this sense we must not forget to distinguish it from the total belonging to a society. To find out the total capital belonging to a society all that we have to do is to add up the capital of all the individuals belonging to that society and then add to it the capital which is under common ownership of society as a whole. We may give it the name of national or communal capital if the society in question may be named as a nation or community.

Sometimes a distinction is also made between what is called *consumer's capital* and *producer's capital*. From a logical point of view the term consumer's capital is a contradiction in itself. In the definition of capital it has been pointed out that capital is a factor of production and not of consumption. Marshall however defines consumption capital as consisting of goods "in a form to satisfy wants directly; that is goods which

afford a direct sustenance to the workers such as food, clothes, house room etc. It is clear that Marshall refers by consumption capital to consumption goods. All capital which is not consumption capital is called producer's capital. It is also called auxiliary or instrumental capital. Tools, machines, factories etc. are put under this class.

We also find the term *free* or *floating capital* used in text books in economics. By this we mean the amount of money that a person possesses and that is to be used for purposes of production. Thus the money which a factory owner has at his disposal will be called his free or floating capital. They are also given the name of fluid resources.

Sometimes the term personal capital is also used. By this is meant the personal qualities of a producer such as his sense of correct judgment, foresight, intelligence, honesty etc.

Accumulation of Capital.—We have discussed the importance of capital as a factor of production. We shall now examine the various factors that are responsible for the accumulation of capital in a country. And then we shall see how far those factors operate in India. The accumulation or growth of capital depends upon savings made by a people. The more a nation saves out of its income the greater is the rate at which there is the possibility for capital to accumulate because saving does not automatically lead to capital. Saving means not spending but this not spending may either take the form of mere hoarding or of investment. Saving when invested only leads to capital. But there can be no growth of capital without saving though every saving may not lead to capital. Therefore we must conclude that for capital saving are necessary. Now savings depend upon two factors: (i). power to save and (ii) will to save.

The power to save that a nation possesses depends upon the difference between its income and its expenditure. Just as an individual with a low income has a relatively low power to save, similarly a community with a low national income possesses low capacity to save. To increase the power to save therefore one of the two things is necessary. First, the income of a community may register a rise. Or secondly, with the same income the level of consumption may be reduced. The in the capacity to save may as well be the result of the simultaneous working of both forces. On the one hand the income may rise and on the other the consumption or expenditure of income may also fall. This naturally would result in a proportionately greater rise in the capacity to save. Thus one necessary for accumulation of capital is the power to save.

It is obvious however that the existence of mere capacity to save is not sufficient for accumulation of capital. It must be supplemented by another factor which is known as the will to save. The will to save in its turn is dependent upon the existence of a number of factors. They may be summarised as under : (i) Prudential considerations and foresight. It means that many a time a person will save as a safeguard against a rainy day. He would save for his old age when his earning power comes to an end. He would save in order to meet certain extraordinary items of expenses such as the education of his children, their marriages etc. He may also save because he wants to provide a good fortune to his descendants. (ii) Consideration for power and prestige. In the modern world, and why in the modern world, in the past also, power and prestige ordinarily go hand in hand with money. It is a matter of common experience that society pays at least formal respect to those who are moneyed men. And to win respect and prestige and honour is the last infirmity of even a great mind. So people save money to fall in the rank of the socially respected and with prestige goes power. In the capitalistic world today we know that the real power lies not with those who live either in White Hall or White House but with Fords and Rockefellers. Even in the circle of a common man the money factor is not unimportant. Therefore the consideration of power and prestige also induce a man to save and grow rich (iii) *Temperamental consideration*—The 'will to save' is also dependent upon the type of temperament one possesses. There is the extravagant at one end and the miser at the other and in between the two there exist a number of gradations finally merging one into another. In the actual world we find persons belonging to all these categories. Other things being equal, a greedy man would save more and an extravagant man will save practically nothing. (iv) *Security*.—The will to save also depends upon the extent of the security of person and property existing in society. It requires no special intelligence to understand that a man will have no desire to save unless and until he has the guarantee that he would be able to enjoy the fruits of his saving in future. For this he must have the certainty that his person would be protected and that his property would not forcibly be removed from him by anyone. We know from history that the desire to save has flourished only in civilized communities where such a guarantee of person and property is a normal thing. On the other hand in those communities which lead a barbaric existence where killing and being killed are the ordinary routine of life, there is very little of saving effected for the future, for the very simple reason that the future is so uncertain. (v) *The rate of interest*.—Another factor influencing saving is the rate of interest. If saving

involves any sacrifice some inducement to people in the form of interest is necessary. From this it follows that higher is the rate of interest the greater would be the inducement to people to save. But the influence of rate of interest on saving is not uniform in the case of all persons. Those for example who have to save only a fixed amount of money would require less savings if the rate of interest is high to reach their fixed amount. If however the rate of interest is low, to save the same amount more saving would be necessary. Thus we find that the influence of rate of interest on savings may be different in different cases. It is also argued sometimes that the rate of interest has no significant effect on savings because mostly savings flow from those people who have high incomes and would therefore save irrespective of all considerations of interest. But because some inducement is necessary to save, therefore rate of interest cannot fall to zero as sometimes is supposed.

Besides the two factors of power to save and will to save there is a third factor also on which the accumulation of capital depends. This last factor is opportunity for investment. If saving is different from capital it is clear that unless there is an opportunity for saving to be invested it cannot take the form of capital. Thus opportunity for investment is the third essential factor necessary for the growth of capital. The stage of economic development achieved by a particular country, the extent of banking facilities existing therein and the strength of credit organisation found prevailing there, are the various factors that determine the extent of opportunity for investment present in that country.

Position in India.—We have examined the various factors determining the growth of capital and have found them to be three in number. Let us see how far they operate in India. So far as the power to save is concerned it is no secret that it is only a very small section of our population which has necessary surplus to make savings. The overwhelming majority of our people live on the brink of poverty and their income is not even adequate to provide the barest necessities of life. Hence as a nation our capacity to save is very small. Economic development of our country and the consequent increase in the income of our masses are the only way to increase our capacity to save.

So far as will to save is concerned we find that to make any judgment about it would be more or less of a hypothetical character. When there is no power to save, to argue whether will to save exists is a bit irrelevant. The fact that under the present conditions of poverty we do not find an Indian agriculturist to be thrifty even in times of his prosperity, but we find him squandering away his resources, is no proof of this that

under better circumstances, he would lack the will to save. Indians like men belonging to other countries are also amenable and responsive to all those motives of foresight, sense of prestige and economic interest and therefore there is no reason to suspect that given the power to save they will display any less desire to save. So far as opportunity for investment is concerned we know that India is very poorly provided in this respect. The banking development on modern lines is still non-existent over the greater part of the country. We have very ill-organised stock exchanges. The economic development of the country has been retarded because of a number of factors and on the one hand means low national income and on the other few opportunities for investment. Summarising therefore the position as a whole regarding the accumulation of capital in India we find that it is not very satisfactory, and improvement in it would not be possible unless and until the economic life of our people in its totality undergoes an overhauling change resulting not only in the rise of national dividend but also in the extension of opportunities for investment.

Machine and its advantages and disadvantages—In an earlier chapter we remarked that, with the coming of the Industrial revolution the economic life of the world underwent a revolution. One of the main characteristics of the new life that emerged out of this revolutionary change was an extended use of large scale machinery. Thus machinery began to command increasing importance in the economic organisation of the countries of the world. From this flowed a number of consequences of much social and economic importance. The question came to be hotly discussed whether the use of machinery has been a blessing or a curse to humanity. The controversy still continues and we still find persons who are opposed to the great importance that machine possesses in our life of today and think it as definitely harmful to the true interests of humanity. On the other hand there are the apostles of the modern machine who think that unrestricted use of machine is necessary to increase the welfare of society. The case for or against machinery, however, is not so simple as that. Nobody can deny the advantages that machine has bestowed upon man. Nobody can also deny the fact that so far the use of machinery has been associated with a number of social and economic evils. Therefore as in all other cases here also our conclusions about machinery would depend upon the balancing of good against evil. Let us then discuss the various advantages and disadvantages that are claimed for machinery.

It would be convenient to introduce this discussion of advantages and disadvantages of machinery with certain introductory remarks. At the very outset it should be

mentioned that it is very difficult to strike a balance between the advantages and disadvantages of machinery in a way that may be applicable to all conditions and circumstances. Secondly different conditions prevailing in different cases make any general statement in this connection of doubtful value. Thirdly the conditions under which the use of machinery is made and maintained in a particular country also affect the actual results in that country to a great extent and may be quite contrary to results expected under better conditions. Much of the condemnation that we hear of machinery is provoked by this third consideration because the introduction of machinery took place in all countries under circumstances which prevented any attempt from being made to safeguard the interests of the workers and the general public. Lastly we should also remember that the comparison has to be made between the present conditions where use of machinery is taken for granted and those conditions which would have existed had there been no use of machinery on modern scale. With these remarks let us now come to the advantages of machinery.

Advantages.—(i) The use of machine has reduced much toil involving heavy and exhausting human labour. There are many works the doing of which would involve much strenuous effort as lifting of heavy weights but the use of machinery has reduced the need for such labour. (ii) The use of machinery has made the doing of many works possible which without it would not be done. The commonest example is that of the modern means of communication. (iii) Monotony in the sense of tedious work arising out of repetitions of same process over and over again has also been eliminated through the use of machinery, because it is the monotonous type of work which is ultimately taken up by machinery. (iv) Another advantage of machinery is that it results in cheaper production. For this there are various reasons. Large scale production with its numerous economies is a direct consequence of the use of machinery which leads to low cost of production. Machine also can do a work much faster than is done by man. This has its effect on the cost of production which is thereby lowered. (v) Machine can do a work more accurately than man. This advantage is more prominent in the case of standardised products. It is possible for machine only to produce things of exactly the same type and form which can replace one another without any difference or difficulty. This is a great help in production. Just as standardised production is the result of the use of machine on the one hand, on the other hand it also facilitates further use of machine. (vi) It is pointed out generally that machine has killed skilled labour. In this connection however we must remember that if machine has killed the old

type of skill existing in the form of manual dexterity and artistic craftsmanship it has in their place introduced forms of new skill required in technical expertness, all round adaptability, inventive ability and trained judgment. (vii) Machine requires greater intelligence and sense of responsibility to work it. As a result it produces in the workers such good habits as exactness, responsibility and also makes him more intelligent in certain respects. (viii) The use of machine has also made labour more mobile. This greater mobility is due to the fact that a labourer who has learnt how to tend a particular machine can very easily learn how to tend a different machinery because even in the case of different machines there is much that is common. Thus labour can move from one industry to another without difficulty. (ix) Lastly the use of machinery has also resulted in increased efficiency of labour on the one hand and as already pointed out lower cost of production on the other. This has increased not only the profits of the employer but also the wages of labour. These then are the various advantages that can be credited to machine. We shall now discuss its disadvantages.

Disadvantages.—(i) The first disadvantage that is pointed out of the use of machinery is that it displaces labour and creates unemployment. The reason is that machine can do the work of a number of persons. So far as this aspect of the use of machine is concerned that it can do the work of many men, there is no doubt that it results in the displacement of labour. But the displacement of labour must be distinguished from unemployment. It is theoretically possible argue that machine on the one hand may displace labour but on the other hand it may also open new outlets for its employment. Thus the net result may be not unemployment but even more employment. Those who are in favour of machine argue likewise. They say that though in the transitional period the use of machine may lead to a net reduction in employment yet in the long period machine would create on the whole more employment. This the machine would be able to do through a number of intermediate processes. For example, production with the help of machinery would mean cheaper cost as well as longer production. Cheaper cost would also result in increased production through increased demand. Increased production would naturally mean employment of more labour. Reduced prices of a particular class of commodities would also mean greater demand out of the money saved for other commodities. Thus demand for new commodities would arise which would also mean more outlet for employment of labour. Extended use of machinery would require production of machinery to a greater and greater extent which would mean further employ-

ment of labour. In this way it is claimed that though the use of machine may result in the displacement of particular labour in the long run it would mean greater employment. This reasoning may appear theoretically correct but its correctness in theory depends on a number of assumptions which are not found in the real world. It is why we find that the history of the increasing use of machinery in our times has been a history of trade-depression and unemployment. We conclude our remarks in this respect by saying that under capitalistic system of production machine must inevitably lead to unemployment as is shown by the history of all capitalistic countries. But if the very system of social organisation changes and production is carried on in a planned way, and for use and not for profit, then machine need not result in unemployment.

(ii) Another disadvantage of machine is that it leads to loss of freedom of the individual worker which hinders the development of his personality. First this is because of the fact that that machine production has been associated with large scale production. Large scale production involves centralization in control and direction as well as initiative which means loss of individual freedom and initiative. It has meant loss of freedom in another sense also. Individual worker has lost the status of independent worker and has been reduced to the position of a wage slave.

(iii) Use of machinery has also meant the loss of skill of the old type because in mechanised production machine work has replaced the workers' skill and craftsmanship.

(iv) Another disadvantage of machine is that it produces nervous strain and tension on the worker because of unnatural conditions of work in the factory and the workshop. The dis-harmony existing between the master and the worker which is an inevitable result of capitalistic system of production has also contributed to the increasing of this tension on the worker.

(v) There is always an element of drudgery in machine work and also to an extent monotony and boredom.

(vi) Uncontrolled use of machinery has also produced bad effects on the health and the morals of the worker. Though it is a fact that conditions in this respect have greatly improved within recent years as a result of increasing labour Legislation and Trade-union efforts, yet there remains much to be done in this respect. And the ultimate solution of the problem can be possible only under a different order of society in which social control over means of production and distribution has been established.

The above discussion clearly shows that the use of machinery has brought in its train both advantages and disadvantages. There are some disadvantages which are inherent in the very nature of large scale production with the help of machinery. The loss of freedom and initiative as a result of centralization

would come in this category. The development of light machines capable of being used on a small scale would no doubt remove this defect. Other evils like those concerning the health and morals of the worker or the disharmony between the capitalists and the labourers, are not inherent in the very nature of machine work but are the products of the system under which production is carried on. Only by a change of the system such evils can be removed. On the whole however we must admit that machinery even up to the present has been a progressive force, and under changed conditions with better control of economic life in the interest of the masses most of the disadvantages at present associated with the use of machinery are capable of being removed. Therefore what is in the interest of social welfare is not the condemnation of machinery as such but its use under changed and improved circumstances. To give up the fruits of scientific knowledge and to refuse to harness such knowledge in the interest of general welfare can never be advisable.

CHAPTER XIV.

ORGANISATION.

Meaning and Importance.—Organisation as a factor of production means the work that is necessary to give push and initiative to any constructive scheme and effort. From our experience of daily life we know that before one begins to do a particular work, on however small a scale it may be, he must prepare a plan to do it, no matter if the plan exists in his mind only. All that it means is that before actually setting to work one has to make the necessary preparation in the form of collecting the necessary things that he would require in the course of work and also of deciding as to how he would proceed with the work. Then throughout the period of the work he would have to keep an eye on the fact that all is going on well. This sort of work regarding control and direction is known as the work of organisation. It should be obvious that some organisation is essential to the doing of any work whatsoever. Take the case of an Indian agriculturist. He is a small scale producer. Still we find that to carry on the actual work of agriculture even he has to make a number of decisions. For example, he must decide in what plot of land he is to cultivate and what crop ; he must decide the time of sowing and the time of watering and harvesting the crop. And after the crop is ready he has to make a decision about the time and market when and where he is to sell his produce. Now all this work which every agriculturist has of necessity to perform would come under the category of organisational work. If we closely analyse this type of work we will find two distinct elements constituting it. First there is the element that is concerned with the work of co-ordination, direction and control. This is necessary to ensure that the work is done with the maximum of efficiency. Secondly there is the element of risk-taking or of shouldering final responsibility. This consists in reaping the final fruits of a productive activity. It is the function of the owner that the organiser performs in taking risk. In modern economic terminology, therefore, the factor of organisation is further divided into those of (i) management and (ii) enterprise.

From the above discussion it is clear that even when production is carried on on a very simple and small scale, organisation is an essential factor of production. Therefore it hardly needs any emphasis that when production is carried on under circumstances more complex in nature, the role of organisation as a factor of production becomes very important. This would be clear from what we find in case of modern industry run on a large scale. Under modern conditions of production entrepreneur occupies a place of great importance. It is he on

whom the responsibility of coordinating different factors of production lies. It is he who has to decide in what proportions different factors of production are to be employed. It is his duty to see that every man gets the work he is best fitted to do. It is also for him to decide in what market he is to sell the finished products so as to get the best price and from where to purchase the various materials required in the work of production at the lowest price. What goods are to be produced and in what quantity they are to be produced is also a matter for his decision. He has to anticipate demand and organise production accordingly. To sum up, all functions regarding the control direction and coordination of a business are to be performed by organisers. Besides them there is one more function that the organiser has to undertake. This is the function of risk-taking. The importance of this function has much increased after industrial revolution. It should however be pointed out that in modern industry this function of risk-taking is separated from other functions of organisation: In a joint stock company we know that the actual work of management is performed by salaried managers who however have no responsibility in the matter of risk-taking. The real risk-takers in the case of a company are the ordinary share-holders. The Board of Directors as a body representative of the share-holders, though finally responsible for all control and direction in theory, in practice really plays a second fiddle to the actual paid managers on the spot.

Quality of a good organiser.—We have discussed above the importance of organisation as a factor of production especially in modern times. Let us now mention some of the more important qualities of an organiser. The first and the foremost thing that is necessary in a good organiser is the quality of real leadership. An organiser must be a real leader of men. He should possess the capacity to infuse a real spirit of corporate work in his men. He should possess the capacity of taking them altogether in a coordinated effort. He must possess extraordinary intelligence and keen sense of right judgment. He should possess a real foresight into the future and much practical wisdom. To sum up then we can say that an ideal organiser is one who on the one hand is a real leader of men and on the other an expert in the work that he has to organise. In the real world organisers are only approximations to this ideal, some of them being nearer the ideal than others.

It would not be out of place to say something on the question whether Indians possess organising ability in adequate quantity or not. Sometimes we find the remark made by several Indian and foreign writers that Indians lack organising capacity. Such remarks are born either of ignorance or of prejudice. It

has been proved beyond doubt that Indians are in no way less efficient and able than people belonging to any other nation. Not only in the past but also in adverse conditions of the present they have made their mark in every field of life and commerce and industry are certainly no exception. If in spite of all this we find today that on the whole Indians have displayed less organising capacity than they should have, it is not because of any inherent incapacity in them but because of lack of adequate opportunity, encouragement and training open to them.

Scale of Production.—In the study of production the question of the scale of production is very important. Firstly its importance lies in its influence on the volume of production. The central economic problem of all times and more so of our times has been the removal of poverty. Our main interest in the study of economics is ultimately derived from our desire to lead a better and a higher standard of life. Better and higher standard of life, there can be no doubt, does mean consumption of more goods and services in the form of adequate and nourishing food, sufficient and decent clothing and commodious and decent housing. All this is not possible without sufficient production. The scale of production is also one of the factors determining the quantity of production, and hence its importance. Secondly, the study of scale of production is important also because a certain scale of production is associated with certain socio-economic conditions of life. We know for example how large scale production in modern times has been responsible for an all round transformation of our life. It has given rise to numerous problems of social economic importance, a complete solution of which has not been so far possible. It is the system of large scale production which has created large industrial towns and cities where human beings are huddled together like cattle and where conditions of living become most immoral and insanitary and hence inhuman. To solve these problems new methods of town planning and sanitary living have been discovered and to some extent the problem has been also solved similarly in the economic field. Large scale production has been responsible for modern combinations and monopolies of industrial life, for great inequalities of distribution, for great duplication and waste in production and a number of other evils. We know these new economic problems of modern life need solution and various efforts are being made and suggested to solve them. It is also a very well known fact that production on a small scale or on handicraft basis has its own advantages and disadvantages. If it keeps the society free from many modern evils of economic life, there are other problems such as of adequate production which it fails to solve. Thus the question of scale of production

deserves a careful study. We have to dispassionately examine the various arguments put forward for and against large as well as small scale of production and see where and under what circumstances which scale of production is to prove on the whole more suitable. We shall first discuss the case of large scale production.

Large Scale Production.—By large scale production we mean a system of production carried on with the help of modern machines where the out-put is large. Production with the help of most upto-date machine only cannot be classed as large scale production. The essential feature of large scale production is that the out-put produced by a factory must be large. For this use of modern machinery is inevitable, but all modern machinery is not necessarily meant for large scale production. We can have production on a small scale carried on with the most modern machine also.

This system of large scale production with the help of the modern machine is the product of industrial revolution. It has brought in its train a number of advantages as well as disadvantages. The various advantages of large scale production are generally classified into those resulting from (i) internal economics, and (ii) external economics. By the term internal economics we understand those advantages which are due to the conditions existing in a particular firm. In other words, they are special and particular to individual firms and factories. The term external economics on the other hand is applied to those advantages which arise not because of the special conditions of any particular firm but because of certain circumstances and conditions which are common to all the firms in a particular industry. Let us take one illustration in each case. Suppose there is a firm which has the services of an organiser who is more able and efficient. It is obvious that in many respects the extraordinary capacity of the organiser would be of advantage to the firm in question—an advantage which would not be present in the case of other firms with less capable organisers. This advantage would be seen in many respects. A good organiser will be able to keep greater contentment amongst the labourers. Thus there would be few conflicts between labour and capital. A good organiser will be able to make a more correct forecast of the future conditions of business thus avoiding many losses which might otherwise accrue. Now it is clear that all these advantages that a firm enjoys are special and therefore internal to the firm itself. They are dependent upon a condition which is not common to other firms. Economies arising from such conditions are known as internal economies. Let us now take an example of external economy. In a modern city where several printing presses

work, every press has an advantage regarding the supply of compositors and the repairing of the machinery which would not be available to a press situated in an out of the way place. These advantages will be equally available to all presses good or bad working in a particular city or town because they arise due to conditions which are not particular to any one press. As in a city so many printing presses work, therefore, we will find that best compositors would be available there, also type foundries would be working there from which types can be obtained and repairing facilities would also be present. From the above examples it should be clear now what we mean by internal as well as external economies.

Internal economies arise due to following causes : (i) Economy of material and utilisation of by-product. When production is carried on on a large scale, raw material in large quantities is to be purchased. It is therefore possible to purchase the material at cheaper rates. This is obviously an advantage. Similarly because in a big factory by-products would be available in large quantities some way of utilising them would be found out which would not be possible in the case of production on a small scale. (ii) Economy of skill. When work is to be done on a large scale you are naturally more careful in doing it. Greater division of labour is possible and every man would be allotted the job which he can best do. This naturally results in more efficient production. (iii) Economy of machinery. Under large scale production the best type of plant and machinery of specialised and expensive nature can be used. The use of machinery is also facilitated by greater division of labour which is an essential feature of large scale production. This is therefore a further advantage of large scale production. (iv) Invention of new machinery and improved methods of production. Large scale industry cannot use only the best machinery available but also can afford to carry experiments for inventing better machinery and better technique of production. Such improvements in the shape of new machinery and new processes are devised by manufacturers for their own use, only big manufacturers can afford to experiment with. (v) Better business organisation. A large firm enjoys advantages in this respect also. It can employ the services of good organisers and greater specialization is possible. (vi) Greater capacity of adjustment. A large scale factory or firm because of its being large has greater capacity to stand difficult times. It can meet depression more successfully than a small sized firm. It can also reap to a greater extent the advantages of prosperous times. We thus find that large scale production offers a number of advantages which are of the nature of internal economies and besides these

advantages there are others arising from external economy. Advantages of external economy are mostly those of localization which we have discussed earlier in this book. These advantages as remarked already arise from the general development of industry as a whole.

So far we have discussed the advantages that result from large scale production but along with these advantages there are certain disadvantages also. (1) With increase in scale of production there does not remain that personal contact between the employer and the employees which is a feature of small scale production and which is a source of much advantage also. Through personal contact it is possible to keep the employees more contented because it is easier to understand and appreciate their difficulties and their view points. The example of the employer also infuses a spirit of identification with the work they have to do. This obviously means greater efficiency. Another disadvantage of large scale production is that it is not suited to the production of certain goods. Artistic goods requiring much creative work and personal attention, goods with an unsteady and inadequate demand, and goods in which the element of individual liking and disliking is great are examples of such goods as are unfit for large scale production. Besides these disadvantages, large scale production after a certain stage is also hindered by difficulty of organisation which arises due to the increased size of the business. It is a matter of common experience that as the scale of the business expands the work of organising it, controlling it and coordinating it becomes more and more difficult. This impedes efficient working and the advantages of large scale production are counteracted. For example, it may be difficult to maintain proper discipline when the size of the firms becomes too unwieldy. Co-ordination between different departments becomes difficult. In brief the work of organisation becomes difficult as the size of the firm increases. Lastly in the case of large scale production a further disadvantage is the difficulty of marketing. Thus we find that large scale production has both advantages as well as disadvantages. But on balancing the two we say that in the case of those goods which are amenable to standardized and mass production, large scale production offers more advantages than disadvantages till it reaches the point of unwieldiness. This is why we find that large scale production is more applicable to manufacturing industries than to agriculture. It is less applicable to agriculture for the following reasons. First, the processes of agriculture are mostly not carried on simultaneously but one after another. This greatly restricts the scope for division of labour. It is for example clear that agricultural operations like levelling

seeding and harvesting cannot be simultaneously done. This means obviously less possibility for division of labour. Secondly, in agriculture land plays more important part than labour. This means that the work of agriculture is spread over a larger area. This makes supervision difficult. Supervision is made difficult also because agricultural work to a great extent depends on the individual judgment of the worker and cannot be reduced to a fixed routine. Thirdly, agricultural machines are also less specialised than other machines. In spite of all these difficulties however we find that large scale production has entered the field of agriculture also and large scale farming with the help of machines is found in many western countries, such as U. S. A., Canada and Russia. We should not forget that the scope for large scale production in agriculture is all the same comparatively limited.

Small scale Production.—Though large scale production is the dominating feature of modern economic organisation, yet small scale production in certain fields even in the most industrialised nations of today survives. This survival of small scale production is due to certain advantages which this system of production possesses. In one word we can say that the disadvantages of large scale production are the advantages of small scale production. The greater personal contact between the master and his employees and therefore greater personal supervision are advantages of small scale production. Production requiring personal attention and having much the elements of personal likes and dislikes such as production of artistic goods or work of tailoring require is also suited to small scale production. A great advantage of small scale production, though not a cause of its survival, is that it does not lead to concentration of wealth and hence mal-distribution of wealth also. This is a great disadvantage of large scale production carried on under the capitalist system. This centralization of economic power is not only an economic evil but also a political evil. How far democracy can minimise this evil is a question. The result of all this discussion about scales of production is that under the existing system of private property and profit motive that scale survives in the economic field which offers maximum momentary gain to the individual producer. The full social value does not matter. On this basis alone however we find small scale production existing in certain lines of production. The tendency towards the neo-technic method of production in which due to the use of electric power the small scale machinery comes on the scene, the scope of small scale production is bound to extend. Further, increased dissemination of trade knowledge, diminishing secrecy of

business and scientific improvements not made from profit motive also help the small scale producer and his disadvantages in comparison to the large scale producer are reduced. These disadvantages we need not repeat here. They are the same as the advantages of the large scale producer.

CHAPTER XV.

DIFFERENT FORMS OF BUSINESS ORGANISATION.

We have seen that every act of production requires a combination of different factors of production. This combination of different factors of production however would not be possible unless the owner of any one of the factors takes upon himself the responsibility of carrying out this combination and thus organising the work of production as a whole. It is here that the question of different forms of business organisation comes in. Form of business organisation means the way in which the organisation of business takes place and is determined by it. We have the following forms of business organisation found in practice, a brief description of which may be useful at this juncture.

(1) **Individual proprietorship.**—Under this form of business organisation one single individual is the sole owner of the business. It is he who sets in motion the whole scheme of production, makes use of his own capital and labour as well as land in the work of production in the manner he thinks best. If need be, he borrows capital from others, employs paid labour and hires land and building for business purposes. After paying out reward to the owners of the hired factors of production and incurring all necessary expenses, it is he who gains if there are profits and loses if there are losses. This form of business organisation we find prevalent in the case of our village artisans to this day. It is found in a number of other fields of economic activity also.

(2) **Partnership** —Under this form of business organisation the ownership of a business or an individual firm rests not in one individual but in a number of them, all of whom are collectively known as partnership, of which every individual member is a partner. Partnership has legal sanction behind it according to the partnership Act of the country. There is a document known as the deed of partnership which contains the terms on which partnership is based. The legal feature of a partnership is the joint and several liability of partners for all debts. It means that it is open to the creditor of a partnership to demand the payment of his debt from any one, or more than one or all of the partners at his choice. The minimum number to constitute a partnership is two and the maximum number is twenty but in the case of a banking concern the number cannot exceed ten. All the partners are not equally active in business matters. There are some who are known as 'sleeping partners' and they take no interest in the actual work of business, their contribution being limited to that of applying funds in the shape of capital. On the death or

lunacy or insolvency of one of the partners the whole business is dissolved.

(3) **Joint stock Company.**—This is the form of business organisation that is most modern as well as common. A joint stock company is an association of individuals who are called shareholders or stock holders and who join together to carry on a specific business and supply a part of the necessary capital. The company comes into existence after a prescribed legal procedure has been completed. The registrar of joint stock companies on receiving the memorandum of association containing the name of the company, the objective of the company, the place of the head office and the amount of the capital etc. and an article of association containing necessary by-laws, issues the certificate of incorporation after which only the company can be said to have come into legal existence. The one distinguishing feature of a joint stock company is that it is looked upon as a legal person different from its shareholders and therefore can sue and be sued in its own name. Another feature of a company is that it possesses continuity of life and the death of a shareholder produces no break. A third feature of a joint stock company is the limited liability of the shareholders. It means that no shareholder is liable for more than the amount of the shares he has purchased. This is in clear contrast with the position existing in a partnership where the liability of every member is unlimited. It is the shareholders of the company who are its legal owners. They delegate their powers to a Board of Directors mostly elected by them. The Board of Directors of a joint stock company is the body responsible for laying down the general policy the company has to follow. Thus we can say that it is the shareholders and the directors as their representatives who can be called the entrepreneurs. It is they on whom the final responsibility lies and who gain by profits and lose by losses of the company. The actual work of management is carried on by a paid staff. The shareholders of a company are of two categories, ordinary shareholders and preferential shareholders. The difference between the two is that preferential shareholders are paid a fixed rate of dividend whereas ordinary shareholders are not given any fixed rate. Moreover, preferential shareholders are paid before any dividend is paid to ordinary shareholders. Similarly when the company goes bankrupt it is the preferential shareholders who are paid in full before anything can be distributed among the ordinary shareholders.

The above are the three main forms of business organisation that we find in actual life. They have their respective advantages and disadvantages. The individual entrepreneur system is suited to conditions of small scale production for which

the resources of an individual are adequate. It has the advantage of personal supervision and interest in the work done. Problems such as conflict between the employers and the employees never arise. Where however production passes beyond the resources of an individual partnership has its place. The chief advantage is that different aspects of work concerning the partnership may be looked after by different partners, the division of work being based on their respective aptitude and ability. Large scale production of modern times however is beyond the capacity of even a partnership. The joint stock company form of organisation is the one that suits it. It is under this form of business organisation that large amounts of capital can be collected through public subscription, the share of every individual subscriber being, however, limited. It is only under this form of business organisation that continuity of existence is possible which is so essential in large scale production. The disadvantage of such a system of business organisation is that it does not provide any personal touch between the worker and the owner which is possible in case of production on a small scale.

So far we have discussed forms of business organisation from one point of view only, but they can be classified in a different way if we take a different point of view. For example, a business firm may be owned either *privately* or *publicly by the state*. We have thus public utilities owned by 'local authorities' like the gas company, the electric company and the water company. We have also business concerns of national importance such as Railways, Posts and Telegraphs which are owned by the central Government of the country. Similarly there may be business concerns owned and worked by provincial Governments also. Thus business organisations may be classified as belonging to the category of private firms or public firms.

There is a third point of view also according to which a business organisation may belong to the "competitive field" or to that of a "*monopoly*." We have a monopolist form of business organisation when any one firm in any particular line of production is in a position to influence the price of the commodity in question. The degree of monopoly may differ from that of a *ring* or a *pool* where only a very loose association between individual firms exists to that of a *kartel* where greater association between individual firms exists, and a *Trust* in which case the individual firms merge into one combination or firm losing their separate existence altogether. There is one more kind of monopoly known as *Holding company*. In this case a board of a small number of persons acquires the majority shares of a particular company and thus gets controlling in it and this company in turn may possess controlling

hand in the case of another company and so the process may continue, the net result being that the board consisting of a small number of persons comes to possess effective control over all the companies thus related.

Lastly forms of business organisation can also be distinguished on the basis of economic system. The different forms of organisation that we have so far discussed come under the category of what is called capitalist economy. The joint stock company is the predominant type of the capitalist form of business organisation. The characteristic feature of the capitalist form of business organisation is this that it is the ownership of capital which is the unit of association and not the individual as such. One gets votes not according to heads but according to the number of shares possessed by him. As distinguished from this form of business organisation, there is the other form based on *co-operative principle*. According to this principle a number of persons combine together for a business purpose on the basis of equality. It means every member of a co-operative society counts for one and never for more than one. He has only one vote and he is the co-owner with other members of a business as a whole. A co-operative society may be organised either for purposes of production or for purposes of distribution. It may also be organised for purchase or sale of commodities which the members either require for carrying on their business or which are produced by them respectively. Co-operative societies are also organised for the supply of credit. There is a third form of business organisation as distinguished from both the capitalist and co-operative forms. This is the socialistic form where ownership rests not in private persons but the state, central, provincial or local. We have already referred to this form of business organisation under the category of public ownership. It is this type of business organisation that is predominantly found in Russia, though to a more or less extent it is found in every civilised country of the world today.

CHAPTER XVI.

LAWS OF PRODUCTION.

In the study of production the last thing that demands our attention is the study of what are called the laws of production. We have seen that every society of human beings for its continued civilized existence requires a continuous flow of goods and services. This in its turn requires the wheels of production to continuously move. Production thus becomes an unbroken process. We do not require only continuous production but also production of increasing quantities to meet the demands of an increasing standard of living of increasing numbers. When more and more is to be produced, there are two ways of doing it. One is that we may multiply the units of production. If greater demand for wheat is felt we may have not one agricultural farm but as many as would meet our requirement. If we have greater demand for cloth we may add to the number of factories manufacturing cloth. Thus more production is possible by increasing the number of farms, factories and business shops. But there is also a second method to meet our increasing demand for a particular commodity. We may not multiply our farms and factories but increase the production from the farms and the factories already existing. This means increased production is possible by increasing what is called the scale of production. In concrete shape it would mean this that a factory that was producing a certain quantity of cloth so far may now be called upon to produce a larger quantity. Similarly we may plan to produce more wheat or barley from the same field. It should be clear to us that in all such cases of increasing the scale of production one essential condition is that at least one of the factors of production remains fixed whereas others undergo a change. Now when production is sought to be increased by increasing the scale of production of the already existing productive units we find that our efforts towards increasing the scale of production result in certain uniformities which are known as the laws of production. If the response to our increased efforts is just in proportion to them we have one law of production. If they are more than proportionate we have another law of production. If they are less than proportionate we have a third law of production. The first is called the law of constant returns, the second the law of increasing returns and the third the law of decreasing returns. Let us discuss each of these laws somewhat in detail.

✓ The law of decreasing returns.—We shall first discuss the law of diminishing returns because of its historical importance. We know that every activity of production calls for the use of

different factors of production. Experience tells us that production is maximum with a minimum cost when the combination of the various factors is an ideal one. Any disturbance in this ideal combination of factors of production will produce an adverse result on production in the sense that the total increase or decrease in production would not be in proportion to the increase or decrease that has taken place in some of the factors of production. Marshall following the classical economists stated the law as follows : " An increase in the capital and the labour applied to land causes in general a less than proportionate increase in the produce raised, unless the increase in capital and labour coincides with an improvement in the art "

This statement though Marshall speaks of the principle as applicable to agriculture as he has admitted, the principle is in fact applicable to all forms of production. From this statement it is clear that an important condition for the operation of the law of diminishing returns is that no improvement in the art of production should take place. The reason for this condition is obvious. A change in the art of production would call for a new organisation of production and a new ideal combination of factors. Therefore when there comes about a change in the technique of production the relative proportions of the factors also change, and it is possible that an increase or decrease in some factors may be necessary to achieve the new ideal combination. Thus the operation of the law of diminishing returns may be temporarily checked because of improvements in the art of production. But in the long run the tendency to diminishing returns is bound to assert itself.

Another point that is clear from the above statement is that the law of diminishing returns is concerned with the physical produce and not with the money price of such a produce. Similarly on the side of factors of production strictly speaking we are concerned with the physical units of different factors of production such as units of labour, of capital and of land etc. In this connection, however, we are faced with a practical difficulty. It is difficult to decide upon proper units of the different factors of production. A further difficulty in this connexion arises when there takes place a change in the quality of a particular factor. Though technically a change in the quality of a factor means a new factor altogether, still because the change of quality is so common in actual life, therefore, practical difficulty arises. To solve this difficulty it has been suggested that factors of production should be reckoned not on the basis of their physical units but on that of their price. A concrete example would make the point more clear. Suppose on a given area of land one dose of capital and one dose of labour,

the latter consisting of one unskilled labourer of a given efficiency, are employed and they produce ten maunds of wheat from that area of land. Further suppose that the amount of labour and capital employed upon the said land is doubled but the labourer now employed is not of the same quality (efficiency) as the former. Then it would be incorrect to think that the amount of labour has been really doubled, and merely by the fact that the produce has also not been doubled in quantity, we cannot conclude that the law of diminishing returns has begun to operate. The employment of the new labour in this case is not doubling the quantity of labour already employed but amounts to adding a new factor altogether for the simple reason that the second labour has been assumed to be of a quality different from the first. - Now in actual life such differences in the quality of different units of the various factors otherwise not classed differently often exist and naturally there arises a difficulty, when factors are reckoned in terms of physical units, in deciding which law of production really holds good in a given case. It is to obviate this difficulty that the suggestion that factors may be reckoned in terms of their money value is made so that comparison between different units of a factor may be possible on a uniform basis. At a particular time this may be a good solution, but when comparison is to be spread over a period of time during which prices of the factors of production have undergone variations, the difficulty is not removed.

A similar difficulty we are faced with in case of produce also when it is also reckoned in terms of physical units. This difficulty, in case of, for example, agricultural production, would arise when comparison between different crops is to be made. We cannot judge whether it is better to devote a certain amount of land labour and capital to the production of wheat or barley unless and until we are prepared to compare the results in each case in terms of their respective money values and not physical quantities. Therefore in such cases even produce would have to be measured in terms of money.

A third point that must be mentioned in elucidating the law of diminishing returns is that it is the variations of average and not marginal returns which determine the operation of the law in any particular case.

Another point that needs clarification is about the use of the words " in general " by Marshall in his statement of the law as quoted above. To repeat, he says : " An increase in the capital and labour.....causes in general a less than proportionate increase etc. etc." What does he mean by the words ' in general ' ? The idea is that it is not necessary that an

increase in labour and capital may at once lead to a less than proportionate increase in the produce raised. If the land is under-cultivated a further increase in labour and capital would in fact mean more than proportionate increase in its produce. In other words it means the same thing which we have already referred to in our discussion of the point of an ideal combination of different factors of production. If an increase in labour and capital results in more than proportionate increase in the produce of the land, it obviously means that to achieve an ideal combination of the various factors additions to already employed labour and capital are necessary. But ultimately a point is bound to be reached when further additions of labour and capital would not bring forth proportionate increase in the produce of the land. This would be the point of ideal combination.

Lastly, we must also make the point clear that the operation of the law of diminishing returns in any case of production does not mean that to produce under such conditions of diminishing returns is not economically profitable. The profitability or otherwise of any work of production is a question to be judged by the relative functions of two things—the money cost of production on the one hand and the price prevailing in the market of the commodity in question on the other. It is quite possible as generally happens that a producer finds it profitable to produce a certain commodity even under the conditions of diminishing returns.

Having discussed the law of diminishing returns theoretically, let us now explain it further by means of an actual illustration as given in the table below :—

Doses of Labour and capital applied to a given area of land.	Total Produce of wheat Mds.	Average Produce Mds.	Marginal Produce Mds.
1	50	50	50
2	110	55 40	60
3	180	60 20	70
4	248	62 2	68
5	310	62 0	62

Doses of Labour and capital applied to a given area of land.	Total Produce of wheat Mds.	Average Produce Mds.	Marginal Produce Mds.
6	366	61	56
7	399	57	33
8	416	52	17
9	423	47	7
10	423	42.3	0
11	418	38	-5

The above table can be represented in the shape of a diagram also.

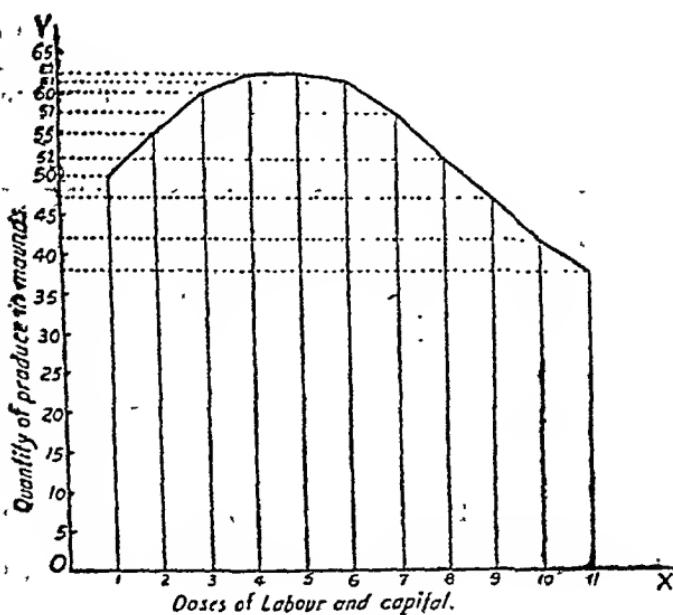


Fig. 4.

In the above illustration we find that the first dose of labour and capital applied to a given area of land produces 50 mds. of

wheat ; as so much of labour and capital is not adequate to cultivate the given area of land fully, the application of further doses of labour and capital results in more than proportionate increase in production. This continues upto the fourth dose, up to which point the average produce continues to rise. With the application of the fifth dose of labour and capital the increase in production is just proportionate, the average produce remaining at the same figure of 62. As further doses of labour and capital are applied the results are, however less than proportionate though the total produce increases up to the tenth dose. After the tenth dose further increase in labour and capital not only does not add to the total produce but in fact diminishes it because due to excessive application of labour and capital the whole work of production is so much disorganised that there takes place an actual decrease in the quantity produced. Thus in the above illustration, up to the fourth dose of labour and capital the law of increasing returns operates, in the case of the fifth dose the return remains constant, and it is with the sixth dose that the diminishing returns begin.

The law of diminishing returns is also known as the law of increasing cost, because as the return per unit diminishes the cost per unit automatically increases.

We have already remarked in the beginning that the law of diminishing returns, though specially applicable to agriculture, applies to other industries also. It applies not only to such extractive industries as mining and fishing but also to the building and manufacturing industries. To take fishing industry first, in the case of river and tank fishing where fish are not found in an inexhaustible quantity, as may be the case with sea and ocean fisheries, after a particular stage every further application of labour and capital would give diminishing returns as the river or the tank in question has a limited capacity and would become less and less prolific. The same thing happens in the working of mines and quarries because as we go deeper and deeper into the mines every successive dose of labour and capital brings diminishing returns, or in other words to produce the same returns more of labour and capital becomes necessary. Similarly in the case of buildings also as we add higher and higher storeys to a house, we find that to get the same amount of convenience in the matter of accommodation more and more effort is required or with the same amount of effort, returns diminish, which is the same thing. Even manufacturing industries are no exception to this law because every act of expansion of the industry, after a certain stage, is not proportionately rewarded. This may be so because the work of coordination becomes increasingly difficult, or increasing

the supply of an essential material may be possible at a higher cost only. Thus it is clear from the foregoing discussion that the law of diminishing returns is applicable to all industries. In fact in the same industry at different stages different laws of production may be found to operate as was the case in the illustration that we have taken. In spite of this universal application of the law of diminishing returns, it is, however, a fact that the law is more applicable to agriculture and such industries as mining and fishing where nature plays a more important part than to manufacturing industries where man's part is more predominant. Let us explain this point a bit in detail.

For the operation of the law of diminishing returns one condition is essential and that is that one of the factors of production is kept fixed in quantity whereas other factors increase in supply as production expands. Now a producer would not think of keeping a particular factor of production fixed in quantity while varying others in order to expand production unless and until the conditions of that particular factor force him to do so. In the case of such factors as agricultural land in particular and other gifts of nature in general such a condition of supply exists. When an agriculturist thinks of producing, say, more wheat from his land he would ordinarily do so by increasing labour and capital but keeping land fixed. He does so because both from the point of view of society as well as, to some extent, of the individual agriculturist in question, the supply of land and at least of the best land is fixed. Therefore we find that in the case of agriculture where the land factor which is more or less fixed, is of great importance the law of diminishing returns has greater application than in other industries where the importance of the land factor is much less. It is for the same reason that in the case of extractive industries like mining and fisheries also the law of diminishing returns has greater applicability. On the other hand in manufacturing industries the importance of land is very little and of other factors whose supply can be conveniently increased is great. Therefore in manufacturing industries the law of diminishing returns operates at a much later stage. This is what Marshall means when he says : " While the part which nature plays in production shows a tendency to diminishing returns, the part which man plays shows a tendency to increasing returns." The reason for this is obvious. A factor of production which nature supplies is not capable of an easy increase and its supply in production has to be kept more or less fixed, and hence in any productive activity in which nature plays a predominant role the law of diminishing returns has relatively greater application.

From the above discussion one more point about the law of diminishing returns becomes clear which may also be mentioned here with advantage. The point referred to is that the tendency

of diminishing returns operates not because of the inefficiency of the producer either because of his out-of-date technique or his bad organisation, but in spite of his best and up-to-date organisation of production. If an agriculturist on account of his own ignorance or incapacity or out-of-date methods of production does not get good returns and his efforts lead to diminishing returns, then such diminishing returns must needs be distinguished from the other tendency to diminishing returns of which we have been so far speaking. And it is the latter tendency which is referred to as a law of production and not the former.

The Law of Increasing Returns — So far we have discussed the law of diminishing returns, but there are two other laws of production, the law of increasing returns and the law of constant returns, which also deserve our notice. To some extent, while explaining the law of diminishing returns we have also referred to the other two laws of production. Marshall has defined the law of increasing returns in the following words: "An increase of labour and capital leads generally to improved organisation which increases the efficiency of labour and capital," thereby leading to more than proportionate returns. From this it is clear that increasing returns in an industry would take place when either in comparison to any one of the factors of production, other factors are in an inadequate quantity. Therefore an increase in the quantity of these inadequate factors would lead to better use of the fixed factors and the returns would be more than proportionate. Or, we may have increasing returns because an increased supply of certain factors leads to better organisation or co-ordination or to many other kinds of advantages. From the illustration that we took regarding the diminishing returns we find that the first dose of labour and capital leaves the land uncultivated and hence further increases in their supply result in more than proportionate returns which continue till the supply of labour and capital becomes sufficient to fully cultivate the land. With the fourth dose of labour and capital this position is reached. To take the case of a manufacturing industry, we find that as the scale of production increases and does not go beyond the capacity of the manager, the industry gets the various external as well as internal economies leading to more than proportionate returns. Because in manufacturing industry the supply of all important factors of production as labour and capital is elastic and capable of easy increase, and land, whose supply cannot be easily increased, is of no great importance, the law of increasing returns has greater applicability in the case of a manufacturing industry, the only limitation being that of enterprise. If any particular work of production is pushed

beyond the limit of successful organisation diminishing returns are bound to begin. The non-availability of the supply of any essential factor may also be a cause for the operation of diminishing returns in the industry. The point of the operation of diminishing returns is pushed farther and farther in a manufacturing industry also because new methods of production and improvements in the old ones are more common in this field. But we must not forget that during the past few decades even in the field of agriculture, science has done much service and the tendency to diminishing returns has been greatly checked.

In the end we must point out first that as diminishing returns is the result of the inability of the producer to increase the supply of a particular factor such as land, similarly increasing returns is the result of the indivisibility of a particular factor, such as enterprise. A concrete illustration would make the point more clear. When any work of production is begun, so far as the factor of enterprise is concerned its minimum unit is one whole-time manager. It is not generally possible to appoint a manager, say, for half of the working time on the plausible ground that there is not enough work for him. It means that if the scale of production is small the manager does not get sufficient work for him. An increase in the scale of production therefore is necessary to give him full employment which would result in increasing returns. Increase in the scale of production is necessary for the simple reason that one of the factors of production, that of enterprise, is indivisible. Thus it is clear that in such cases increasing returns are the results of the indivisibility of a particular factor of production.

The Law of Constant Returns.—Having discussed the laws of diminishing and increasing returns it is not difficult to understand the meaning of the law of constant returns. When the application of fresh doses of certain factors of production with one of the factors remaining fixed leads to just the proportionate returns we have a case of the operation of the law of constant returns. In the above illustration taken to explain the law of diminishing returns we find that with the application of the fifth dose of labour and capital the law of constant returns operates. In other words the average returns when four doses of labour and capital are applied are sixtytwo which do not change with the application of the fifth dose also. The law of constant returns also operates when the tendency to diminishing return is counter-balanced by the tendency to increasing returns but such cases are rare in practical life. Generally at any particular time in any particular industry it is the one or the other tendency that operates.

PART IV.

CHAPTER XVII.

EXCHANGE.

Meaning and importance of Exchange.—Exchange in economics does not mean anything different from what it means in the popular sense. Exchange here, as elsewhere, means change of one thing for another. If I am prepared to give my fountain pen to my sister and take from her a beautiful painting in return and in case she also agrees to this proposal of mine, we will say there has taken place an act of exchange. Similarly when we purchase a book from the bookseller for a given price, there takes place an act of exchange—the book is exchanged for the money that is paid as its price. A number of such instances can be quoted to illustrate the meaning of the term (exchange), but it is unnecessary to do so.

Now, from the examples taken here it becomes clear that the necessity for exchange arises due to a particular want that one feels and for the fulfilment of which he is prepared to make some sacrifice. I feel the want of a good painting and to satisfy this want I am prepared to sacrifice my pen. I feel the want of a book and to satisfy it I am prepared to pay the necessary price. From this it becomes quite evident that the necessity for exchange lies in lack of self-sufficiency. If I were totally self-sufficient in the sense that without the help of anyone else it was possible for me to satisfy all my wants, then there would be no place for exchange in the organisation of my life. I would cultivate the land and produce my own food. I would spin and prepare my own cloth, and I would build my own house as well. I would have very few other needs and I would myself satisfy them. It is why that when life is primitive and every man is self-sufficient, there is practically no room for any kind of exchange activity. But as man progresses further and further in the field of what is called civilized living, his wants multiply, and his functions and activities become specialized. Now he does not himself produce his own food, clothing and shelter, all at the same time. He becomes confined to any one of the many professions and exchanges his services or the results of his services with those of others. Thus exchange comes to have a place in his life and he becomes more and more civilized, the importance of exchange also accordingly grows. It should, therefore, be not difficult for us to understand the great importance of exchange in modern life with its specialization and extreme division of labour. To-day on the one hand the wants of man have greatly multiplied, and on the other his activities have been confined to a narrower

and narrower field. Thus practically all of his wants he has to satisfy through the mechanism of exchange only. Take even the case of an Indian agriculturist who leads a simple life with limited wants. But he also sells his crop after the harvest in the market and out of its proceeds purchases his clothing, his shelter and his other requirements of life. If such is the condition of an Indian agriculturist, there should be no limit to the extent of dependence that a modern factory worker has to suffer from in the satisfaction of his wants, while he earns his living by concentrating himself not on the production of any single commodity as a whole but on a certain part of it only. The development of modern means of communications has also extended the scope and importance of exchange because it is possible to consume in an out of way corner of India the products of a country thousands of miles off. Thus the importance of exchange in modern life is undisputed.

Exchange results in gain to both parties — It is often remarked that exchange is impossible without the existence of two parties or persons who agree to exchange their goods at a certain rate. Though this is true for all practical purposes, theoretically it is not very correct. There is room for exchange even in the case of a person having no dealings with another. Every man exchanges leisure with hours of work, and one activity with another. In essence exchange is the result of the working of the two laws, the law of utility on the one hand and of disutility on the other. We are always trying to maximise the former and minimise the latter. A hungry man in the forest decides to pluck some wild fruit from a tree to satisfy his hunger. The effort involved in plucking the fruit brings him disutility, but the fruit, which he gets in return, gives him utility. He goes on plucking the fruits so long as their utility is more than the disutility of his efforts. When the utility is just equal to the disutility he hesitates and is in doubt. But if utility is out-weighed by disutility he stops plucking the fruit. Thus an act of exchange must result in net gain to the party which performs it. Otherwise it would not be performed.

This holds good even when exchange takes place between two parties or persons. In such cases which are so common in our day to day life every act of exchange brings gain to both the parties. This can be better explained by taking a concrete illustration as given in the table below.

Units.	Marginal Utility of Bread,	and Butter.
1	50	70
2	45	60
3	35	40
4	20	20
5	10	5
6	5	3
7	3	1

Suppose in the above table the utility of 'bread' and 'butter' is the same to A and B both, but the former possesses 'bread' only and the latter only 'butter'. In such circumstances it would be profitable to A and B both to exchange four units of 'bread' for four units of 'butter' as a consequence of which both the parties would gain in utility. Thus when A would exchange one unit of his bread for one unit of B's butter his gain in utility would be equal to $(70-3)$ 67 units, the difference between the utility of the first unit of butter that he will get (70) and the utility of the 7th unit of bread he would part with (3). Similarly in the case of B also the gain in utility would be equal to $(50-1)$ 49 units, the difference between the utility of the first unit of bread to him (50) and the utility of the seventh unit of butter to him (1). And this gain in utility would continue to both parties up to three units ; the exchange of the fourth unit of bread for butter would mean neither gain nor loss to any of the two parties and they may carry their exchange to this limit, but the exchange of the fifth unit of one commodity for another would mean a definite loss to both of them and hence no exchange would take place. By exchanging four units of bread for four units of butter the gain to A would be equal to $(70 + 60 + 40 + 20) - (3 + 5 + 10 + 20)$ which would come to 152 (190 - 38) units in net, being the difference between the total utility of butter that A has got and of bread with which he has parted in return. Similarly, the net gain in utility to B by exchanging four units of butter for four units of bread would come to $(50 + 45 + 35 + 20) - (1 + 3 + 5 + 20)$ i.e. 121 units. Thus it should be more than clear now that exchange results in gain to both the parties concerned.

Form of Exchange.—Having discussed the meaning and importance of exchange and the gain that results from it to both the parties, it is now necessary to describe the form that exchange may take place. There are two forms that an exchange transaction may take. One is known as '*barter*' Another is known as '*purchase and sale*'. In the case of barter there is direct exchange of one article for another. As already mentioned, when I exchange my fountain pen for a painting of my sister, it is a case of barter. Similarly when I purchase a book from a bookseller it is a case of purchase and sale.

Of the two forms of exchange described above, it is found that as man has progressed farther and further in his march towards civilization, the purchase and sale system has replaced the barter system. In other words the barter system has prevailed in those societies where life has been simple and wants few. In the case of Indian villages even today we find that to some extent the barter form of exchange prevails. Vegetable and village fruit are often exchanged for corn in an Indian village. The village washerman and the village tailor and the village 'purohit' and the village sweeper, and the village cobbler are still found to give their services to their customers not for money payment but for payment in kind. But as our villages have been drawn into the circle of international exchange, money economy with purchase and sale as one of its consequences has been replacing the barter system. This is so because with a more complicated economic organisation, with greater and greater division of labour the inconveniences of the barter system begin to arise. Let us now discuss in detail these inconveniences.

Inconveniences of Barter.—The system of barter or direct exchange of one commodity for another presents us with some difficulties. First, in the case of barter it is essential that there should exist the condition of double coincidence. I can exchange my pen for my sister's painting only when not only I stand in need of a painting for which I am prepared to give away my pen, but my sister also stands in need of a pen and is also prepared to give away her painting. So long as this double coincidence is not present no act of exchange would be possible under the system of barter economy. To take another example, it is possible for a house-wife in an Indian village to exchange her corn for some green vegetable because on the one hand she stands in need of vegetable, and on the other the vegetable-seller stands in need of corn. To find out this double coincidence is obviously inconvenient specially in an economy where division of labour has taken place to a great extent and hence the barter system has to yield place to the system of purchase and sale.

Another inconvenience arising out of barter system is regarding the division of goods for purposes of exchange. Suppose in the example of the pen and the painting we have been taking, it is felt that to exchange the painting for the pen would be a losing bargain from my point of view, still I have no remedy open to me except one of giving up the idea of exchange altogether, which, however, is no remedy. It is not possible for me to give half or three-fourths of my pen for the painting, because the pen is not divisible in this way. Suppose

again that a person owning horses wants to exchange some of them for a few oxen with another man. The terms of exchange to be settled must be such as enable the two parties to exchange a given number of horses for a given number of oxen. Let us assume that it is agreed that the value of three oxen is equal to two horses. But if the person owning horses wants not three but only two oxen, how is he to complete the transaction. He cannot calculate the value of two oxen according to the rules of arithmetic and offer $1\frac{1}{2}$ horses for two oxen which would be their exact value. Either the owner of the horses must suffer by giving two horses and taking three oxen though he requires only two of them, or the owner of the oxen should suffer by accepting only one horse for two oxen. If none of them is prepared to suffer, the exchange would not take place. Thus this inconvenience of barter is greater. We know from our day to day experience that in case of purchase and sale through the aid of money, such difficulty can never arise, because money is capable of division in smallest fractions and hence very correct measurement of value is possible.

There is also a third difficulty associated with barter system. This is the result of the absence of any common measure of value. In a money economy, the value of all things are expressed in terms of a common medium of exchange and hence comparison of values is also possible and exchange is also facilitated. But in a barter economy value of any one article has to be expressed differently in terms of different commodities and this makes on the one hand exchange difficult and on the other comparison impossible. The owner of horses will have to determine the exchange value of his horse in terms of oxen when he wants to exchange them for oxen, in terms of wheat when he wants to purchase wheat, and in terms of any other thing if he wants to exchange that thing for his horses. Obviously, it is an arduous job. Thus from the above account it is quite evident that barter economy is very inconvenient. So long as the economic life of society is organised on a simple basis, men having very few wants, most of which they satisfy themselves in a direct way and occasions of exchange are also few and far between, the barter system of exchange can serve the purpose of society. But as the character of society undergoes change, division of labour is introduced into it, and production is carried on not for self-consumption, but for the market, the inconveniences of barter become too much to be neglected. The natural consequence of this process of development is the substitution of a money economy in place of a barter economy. The advantages of a money economy are several which need not engage our attention at this point however.

CHAPTER XVIII.

MARKETS.

Market is an essential condition for the taking place of an act of exchange. We shall, therefore, discuss in the present chapter the problem of markets at some length.

The meaning of market.—In economics market means something different from what it means in our day to day parlance. Ordinarily, by market we understand a particular place where sellers and purchasers meet to carry on the business of sale and purchase. In economic terminology, however, market does not refer to any particular place as such. The reference here is to the purchasers and sellers of an article who compete with one another in the matter of purchase and sale of the article in question. It is not at all necessary that all those purchasers and sellers should assemble together at any particular place, as is not so often the case in modern times. Suppose in the purchase and sale of any commodity, say wheat, the producers and consumers of wheat from all over the world come in competition with one another, then the market for wheat would be considered a world market. Similar examples can be taken of other articles as well. In the case of fresh vegetables mostly it is the producers and consumers living in a particular locality only, say a town or city, who compete with one another. Hence market for such articles is local in its extent. Of course modern methods of cold-storage have extended the area of such markets also to a certain extent. Thus, the first point in connection with the study of markets is about its meaning. To repeat, in Economics market means a group of sellers and purchasers of a commodity in which free competition exists.

Just as a market may be wide or narrow, it may also be a good market and a bad market. The feature of a good market is the presence of perfect competition between buyers on the one hand, sellers on the other, and between buyers and sellers on the third. For a good or a perfect market it is necessary that all hindrances to competition between different parties dealing in a market should be non-existent. Full publicity about the price prevailing in a market, and absence of any kind of restrictions in the fixing of prices by competition, are some of the conditions essential for a good market. Easy and rapid means of communication are helpful in keeping all the buyers and sellers in full knowledge of market conditions. Similarly the possibility of exact grading in the case of a particular commodity also makes its market good because buyers and sellers can know without doubt the type of goods they are dealing in even

when they are at a great distance from one another. Thus competition is facilitated. In fact generally the conditions that make a market wide also go to make it good. But there can be certain markets which are narrow though good. The chief characteristic of a good market is that in it the principle of one market, one price would operate completely and continuously. Such markets are few in real life but some of the best organized markets do reach the ideal very nearly. Stock exchange markets where shares and stocks of business firms or governments are sold and purchased are one example of such best organised markets. Generally, however, markets with not perfect but imperfect competition are found to exist.

The law of the market.—The law of the market says that in a market with perfect competition at any time for the same commodity only one price would prevail. This is also known as the law of indifference, as Jevons a well-known English economist named it. He so named it because the law was applicable in the case of a commodity which was of such a uniform and homogeneous quality in its different units that it was a matter of indifference for the purchaser to use one unit of it or another. When a market is perfect in the sense that full competition reigns therein, it is only natural that throughout the market at any particular moment one commodity should command only one price. If any seller charged a price higher than the one charged by another for the same commodity, no purchaser would go to him thereby forcing him to lower down his price to the level of others. Similarly, if any purchaser was not prepared to pay a price for a commodity which others were prepared to pay, nobody would sell him the commodity in question thus forcing him to pay the same price as others are prepared to pay if he thinks it necessary to satisfy his want for the said article. It is, therefore, commonsense that so long as different buyers and sellers are free to purchase and sell a commodity from and to anyone they like and there is no hindrance in their way to do it, in the same market, at a given time only one price shall prevail for one commodity. This tendency of price to equate to a uniform level is known as the law of the Market.

Types of Markets.—Markets may be classified on more than one basis—space, time, and function. On the basis of space we have local markets confined to only one locality, a village, a town or a city; provincial markets where buyers and sellers come from the province as a whole; national markets covering the whole of a particular country; and world or international markets. Which extend beyond the boundaries of anyone country. In India in the case of vegetable and fruit we

have local markets ; in clothes of a special type worn in a particular province only, as the turban in Rajputana, a provincial market, and in dhoties a national market. Lastly in such raw produce as cotton, or in wheat or in gold and silver we have international markets.

From the point of view of time, markets may be divided into three classes. The day to day or short period markets, in which price is the result of the temporary equilibrium of demand and supply. Supply in such markets is limited to the existing stocks in hand. The long period markets, in which supply can be adjusted to demand, its increase being limited to the maximum capacity of the existing equipment. The very long period markets, in which there is time enough to shift even the factors of production from one line to another in response to changes in demand. Lastly we have the secular period markets, in which there is time long enough to allow changes in population and its tastes, fashions and habits.

On the basis of function, we have as many markets as the commodities that are dealt with. Thus we have the stock and share market, the bullion market, the commodity market all of them with their respective subdivisions running into large numbers.

Conditions of a wide market.--We have already mentioned the point that some commodities may have wide markets and others narrow. We shall describe in the following lines the conditions that favour the existence of a wide market. These conditions can be grouped under a few sub-headings. First, there are some conditions which concern the nature and quality of the commodity as such. Secondly, there are others which concern the marketing organization. Thirdly, there are those which concern the wider economic environment which exists at a particular time. And closely concerned with this third one, there is the fourth sub-division which is concerned with the political conditions of the time. We shall take each of these sub-divisions one by one.

To take first the conditions which relate to the nature and quality of the commodity, we find that the following deserve special mention.

Durability.--The commodity in order to command a wide market must not be of a perishable nature but fit to last for a fairly long time. Gold and silver possess this characteristic, whereas green vegetables, milk, fruit etc., do not. The former have a wide market while the latter command a narrow one.

The days introduction of cold storage system and speedy communication have widened the markets of the

Portability is the quality of having much value and less bulk so that the transportation charges of carrying the commodity to great distances may not be prohibitive. Fuel-wood, for example, lacks the quality of portability as in comparison to its bulk it will have very little value. Hence it does not possess a wide market. On the other hand gold, silver and stocks and shares possess this quality in ample degree. Their transportation cost is very little.

Suitability for grading and sampling.—A commodity whose description is possible by grades or whose samples can represent the quality of the whole, is a fit subject for wider exchanges, because in such cases it is not necessary for the purchasers who are at a distance to personally go to the place where the commodity is stocked in order to examine and its quality. This naturally makes for wide markets. Wheat, determine raw cotton, and other staples possess this quality.

An efficient marketing organization depends upon a number of conditions, such as existence of well-organized and regulated markets, expert and efficient agencies of purchase and sale, common weights and measures, and efficient, speedy and cheap system of spreading market news from one place to another.

Thirdly, coming to the economic environment and conditions existing in relation to a particular commodity, the following points are worth mentioning.

A wide demand.—This is the first essential factor in the economic environment necessary for a wide market. A commodity the demand for which is limited can never have a wide market whatever other favourable conditions may or may not exist. It is for this reason that 'dhoties' and 'saries' cannot have an international market.

An adequate supply.—Mere demand on a large scale is not enough unless and until there exists the necessary supply also to meet the demand. In the case of best paintings a limited market exists because of inadequate supply to meet a larger demand.

Besides the above factors relating to the commodity in question, existence of certain other general conditions about the economic environment is also necessary.

A sound and efficient banking and currency organisation in the country is of much help in widening the area of the market. Banks make arrangement for credit and a sound currency maintains relative stability in the purchasing power of money, both of which are essential for wide markets.

Similarly a well developed system of transport and communications is the pre-requisite for the existence of wide

markets. It requires no imagination to realize that in the absence of the modern railway, the steamship, the telegraph and the telephone, national and international markets which are such a common feature of modern economic life would have been an impossibility.

Lastly we come to the conditions that concern the existence of peace and security in the country. It is a matter of common knowledge that in conditions of political turmoil and insecurity economic life does not prosper. Our present experience of the war time has more than clearly demonstrated how peaceful economic activity is curtailed in its extent and scope in times of such political instability. Thus existence of peace and security is also a necessary condition for wide markets as for other kinds of economic activities.

From the above discussion it is obvious that the existence of a wide market is dependent upon the fulfilment of a number of conditions of widely different nature.

CHAPTER XXIX.

THE THEORY OF VALUE.

The theory of value in economics is concerned with the discussion of the problem of how the value of a commodity is determined. In other words, it is the purpose of the theory of value to explain how much a commodity should command in exchange in terms of another commodity. Where however, money economy prevails and the direct exchange of one commodity for another is not the general practice, it is not the determination of value but of price that is of practical importance. Hence in the present chapter we shall discuss the problem of the determination of price rather than value. Price means nothing else except value expressed in terms of money.

Demand and supply price.—Everyone of us knows that most of the commodities that a man wants command a price without the payment of which they cannot be had. Why is it so, is the first question that would face a student who studies the problem of price? The answer to this very natural question is quite easy and clear. A commodity which is purchased and sold at a price in a market is so sold and purchased because the seller is not prepared to part with it without getting a price and the purchaser is ready to pay the price to obtain the commodity. Had any of the two conditions not existed there would have been no question of a price being paid for a commodity. If a commodity has no supply price in the sense that its seller is not going to change it for anything, merely the willingness of a purchaser to pay for it, in other words merely the existence of a demand price, is not sufficient for the commodity in question to carry a price. Similarly unless a commodity has a demand price in the sense that its purchasers are ready to pay for it, merely the existence of a supply price for it would not be sufficient for the commodity to command a price. Thus the price of a commodity is dependent upon the two factors of a demand price and a supply price. It is in this sense that we say that price is a function of two factors, demand and supply. We can express the same idea differently by saying that demand and supply are the cause of price. But at this point a caveat need be entered.

Interdependence of demand, supply and price.—When we say that demand and supply are the cause and price the effect of their interaction, we do not mean that it is only the demand and supply which affect price as active factors, whereas price as such does not influence demand and supply. Price is not a passive phenomenon. It also has its influence on demand and supply, but, it should be remembered very carefully, not on demand price and supply price. And it is one thing to say

that demand price and supply price are the cause and price at which a commodity is ultimately purchased and sold the effect; and quite another thing to say that demand, supply and price are interdependent and act and react upon one another. We should explain the difference between these two statements more clearly. Demand price and supply price are the cause in the ordinary sense that without them price would not emerge as a settled conclusion. But the interdependence of supply, demand and price means this that a change in price affects the quantity demanded and supplied. Other things being the same, a lowering of price would increase the quantity of a commodity demanded and decrease the quantity of a commodity supplied. This effect of a change in price on the quantity demanded and supplied is the result of making certain demand price and supply price effective which previous to this change in price were not so. And there is all the difference between the existence of a demand price and supply price and an effective demand price and supply price. Price is not the cause of demand price and supply price, but as we have already pointed out, it is the demand price and the supply price which are the cause of price. Any change in price is always the result of changes that are initiated either on the side of demand price or supply price or both. But a change in price so resulting would certainly have its effect on the circle of effective demand and supply prices. It is in this sense that demand, supply and price are said to be interdependent. Let us take a concrete illustration. Suppose a certain commodity, say a fountain pen, has the following demand and supply schedule:—

No. of pens demanded.	Price in Rs.	No. of pens supplied
500	40	1,000
700	30	850
1,800	25	800
1,000	20	700
1,500	15	600
2,000	10	2,500
3,000	8	3,000

The figures shown in the above table are purely arbitrary without any reference to realities but they would serve our

purpose all the same. It is clear from the table given above that at different prices different numbers of pens are demanded as well as supplied. In the first instance it is at the price of Rs. 25 per pen that the quantity demanded and supplied equates and this, therefore would be the price that would rule in the market. This price is obviously the result of demand price as well as supply price. But the fact that in the market fountain pen is being sold and purchased at a certain price, in this case Rs. 25 per pen, is no proof that there has come to an end either the demand schedule or the supply schedule. From the above table it is quite evident that there are many more persons who have a demand price for the pen but it remains ineffective because their demand price does not coincide with any supply price. Similarly there exists a list of ineffective supply prices also because at those prices demand does not equate with supply. Now, it so happens that the technique of producing fountain pens undergoes a great improvement and fountain pens are produced much more cheaply than before. As is seen in the above table at Rs. 8 it is now possible to produce 3000 pens and at this point the demand for pens is also the same. The result would be the settlement of a new and lower price of pen, at Rs. 8 per pen. When the price comes down from Rs. 25 to Rs. 8, 3000 pens are sold and purchased in the market instead of 800. The lowering of the price has not affected the demand price; what actually has happened is this that a demand price which so long was ineffective has now become effective. And the ultimate cause in this is not the lowering of the price but of the supply price due to improvement in the methods of production. But in one sense a lowering of price, itself made possible by a lowering of supply price, might have created a new demand and therefore demand price also. There might be a few persons in the new group of the purchasers of 3000 fountain pens, who never thought of having a pen and their demand for pen came into existence with the lowering of price. Still the initial cause for this new demand is not price, but supply price. Similarly changes on the side of demand price may also bring about corresponding changes in the price and supply price. Let us suppose for a moment that due to a great decrease in the number of students the demand for pens falls to only 200 and to produce them in such a small number only raises the supply price to Rs. 60 per pen. Also suppose that at this price these two hundred pens are purchased by the students. It may be an apparently correct argument to say that the raising of price to Rs. 60 has lowered the demand to 200 pens, but the reality is that the change was initiated on the demand side. All this discussion has been thought necessary to impress upon the student that supply

price and demand price are the real factors which function as cause and price is the result ; and when we speak of the interdependence of demand, supply, and price all that we mean is that changes initiated either on the demand side or on the supply side pass on their effects to the other side through the mechanism of price. Price ruling in the market is a hyphen that joins the two sides of demand and supply and has no existence independent of either the one or the other. But demand as well as supply conditions would remain inoperative and ineffective without the intervention of price. Price thus integrates the two into an effective and operative whole, and hence the justification for the statement that demand, supply and price are interdependent.

Demand price and supply price further examined.—We have seen the fundamental importance of demand price and supply price in the fixing of the price of a commodity in a market. It is, therefore, necessary to examine these concepts a bit in detail.

To take the demand price first. Demand price is an indication of relationship between the quantity demanded and a given price. To understand this relationship there are three questions that must be answered. To begin with we must explain why demand is related to price. The reason is obvious. A person is prepared to pay a price for the commodity demanded because the commodity in question has a certain utility or want-satisfying power for him. Secondly, this relationship between quantity demanded and price functions according to a definite law, the law of diminishing utility. The law says that the lower is the price charged the greater would be the quantity demanded because the more you have of a commodity the less becomes its utility to you, other things remaining the same. This relationship between the quantity demanded and price is illustrated by a falling demand curve as given below :—

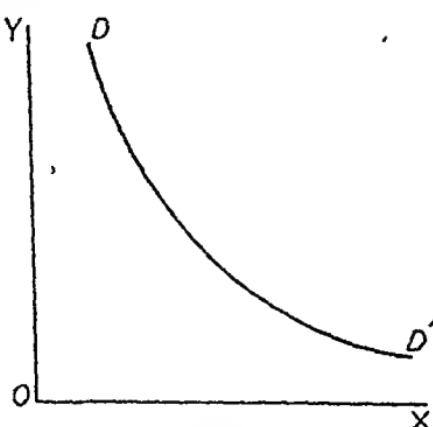


Fig. 5.

The third question about this relationship is, at what point the relationship becomes effective ? The answer to this question is that it is at the point of margin that this relationship functions. In other words it is the marginal utility of the commodity in question that determines price from the side of demand i.e., demand price. Marginal utility of a commodity is the utility of one unit less or one unit more. It is the rate at which the total utility derived from a commodity increases. Because independently all units of a commodity have equal utility for a purchaser he would pay the same price for all of them. But each unit of a commodity viewed in the back ground of all the units taken as a whole has a different utility. Hence the price paid is one that would be paid for a unit having the least utility or in other words marginal utility. Suppose oranges have utility for me in the following order :—

Number of oranges.	Units of utility.
1	10
2	8
3	6
4	5
5	3
6	2
7	1
8	0

Suppose one unit of utility is measured by one anna. Now, independently one orange is as good as another. But in a group of say seven oranges, the utility of the first orange is 10, of the second is 8 and so on. It goes on diminishing till we have the utility of the seventh orange as 1 only. This is the marginal utility. And if I have to purchase seven oranges I would not pay for them more than one anna per orange, because one unit of utility is represented by one anna. If the price in the market is annas two per orange. I would purchase only six oranges, because the marginal utility of six oranges to me is represented by two annas. Therefore, it is at the point of margin of a purchaser that the price of a commodity so far as the demand side is concerned is determined.

make the point clear : Suppose the first group of 50 oranges can be supplied at one anna per orange, the second group of another 50 oranges at two annas per orange, and the third group of a further instalment of 50 oranges at three annas per orange. If all the 150 oranges are to be purchased, then every orange would be sold for three annas, this being the marginal point; but if only 100 oranges are to be purchased a price of annas two per orange would call forth the required supply, in this case the marginal supply price being annas two per orange. Thus in the case of supply also we come to the same conclusion that so far as the supply side is concerned price is determined at the point of marginal supply.

The theory of value stated.—So far we have examined the concept of demand price and supply price separately. It is out of them now that a theory of value has to be woven out. We have seen that on the demand side it is the marginal demand that determines price and on the supply side it is the marginal supply that determines it. Now, actual price in the market, therefore, is settled at a point of intersection of these two prices i.e., where the marginal demand price is equal to the marginal supply price. Thus the theory of value or the principle underlying the determination of price of a certain commodity in a general form can be stated as follows : " Every commodity has its demand price as well as its supply price determined by their respective points of margin, and at a point where these two prices interact each other the actual sale and purchase of the commodity will take place. Thus the price of the commodity is determined by the interaction of the demand and the supply prices and is such at which the quantity demanded is equal to the quantity supplied. The following table will illustrate our point more clearly :—

Demand price in Rs. per unit.	Quantity demanded or supplied (No. of units).	Supply Price in Rs. per unit.
10	100	12
8	150	10
6	250	8
4	500	4
3	700	3½
2	900	3
1	1000	2

In the table above we find that it is at the price of Rs. 4 per unit that the quantity demanded is equal to the quantity supplied. Hence in the market the price will settle at this figure. This is called the equilibrium price because it is at this price that demand equilibrates the supply, and other things remaining the same, there is no tendency either towards an increase or decrease of supply. Suppose, however, that the price were higher than this, say Rs. 8 per unit. Then the quantity which the sellers would be prepared to sell at this price would be more, 250, than the purchasers are prepared to purchase, 150 only. The result will be that some of the stock supplied will remain unsold, and if it is to be disposed of the price will have to be lowered. Similarly, if the price were lower, say Rs. 3 per unit, then also the quantity demanded and supplied would not be equal. Therefore, it is at Rs. 4 per unit the price would be ultimately settled. Temporarily it is possible that a few transactions may take place at a higher price because of the greater intensity of desire of some consumers or at a lower price because some sellers are in more urgent need of money and hence over-anxious to sell, but ultimately the price must be fixed at Rs. 4 per unit if the demand and supply have to equal each other.

The above illustration can be represented by a diagram also.

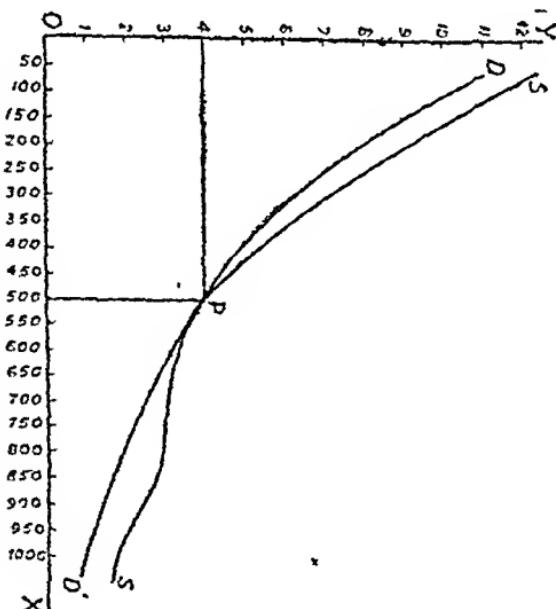


Fig 6.

The point where DD' cuts the SS' price will be fixed. A higher or a lower price will leave part of the supply unsold.

The above table and diagram, so far as supply is concerned is based on increasing returns. It can, however, be constructed on a different basis also, either of diminishing or constant returns, as given below :—

Quantity demanded	Price	Quantity Supplied
100	10	1000
150	8	800
250	6	600
500	4	500
700	3	450
100	2	300
1,000	1	150

(The Supply Schedule shows D. Returns).

In the case of constant returns the supply schedule would assume the following form :—

Quantity demanded	Price	Quantity Supplied
500	4	1000
500	4	800
500	4	600
500	4	500
500	4	450
500	4	300
500	4	150

The corresponding diagrams are given below :—

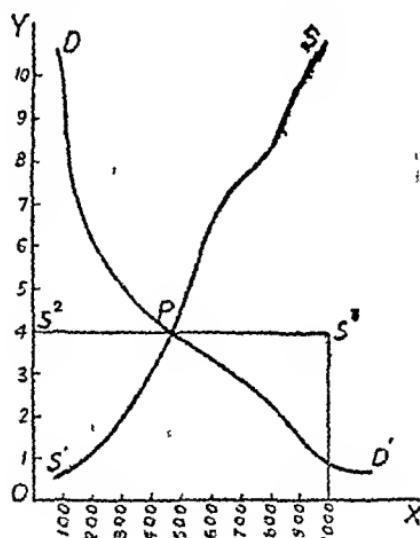


Fig. 7.

P is the point where price will be fixed as demand and supply curves intersect at it.

Importance of margin in the determination of value. -- We have seen how value or price of a commodity is determined at a point where marginal demand price and marginal supply price intersect each other. From this the importance of the margin becomes clear, but to avoid any mis-understanding it must be more clearly explained and appreciated. When we speak of marginal utilities determining value, what exactly we mean is that it is at the point, known as margin, that the forces of demand and supply converge in the fixing of prices of commodities. Thus value is determined by demand as well as supply as a whole but the marginal point is only of strategic importance because it is here that we can appreciate the net result of the forces of demand and supply as working in the determination of price. In fact Prof. Robbins is correct in his statement that "Marginal uses and costs do not govern value but are governed together with value by the general relations of demand and supply," because the point where the total demand is in equilibrium with the total supply is known as the marginal point and obviously is the outcome of the working of the forces of demand and supply as a whole. It is, therefore not by the point of margin but at the point of margin that price is fixed up. In one of the illustrations given above it is not only the four hundredth unit of the commodity in question that fixes price at Rs. 4 but it is all the four hundred units, in which obviously the marginal unit *i. e.* the four hundredth unit, is also included, which are responsible for the fixing up of the price at Rs. 4, neither more nor less. Thus the unit which is known as the marginal unit is only one of the many units, all of which are equally important in determining value.

There is one more point that needs clarification in this connection. In theory we argue that value is determined exactly at the point where marginal demand meets marginal supply prices. But in real life such exact correspondence of margins on the two sides is not found. When I purchase half a dozen oranges from the market say at the rate of one anna each, it does not mean that the marginal utility of the sixth orange to me is just balanced by the utility of one anna to me; nor does it mean that one anna just measures the marginal utility of oranges to the seller. The buyer has a maximum beyond which he would not pay, this maximum is determined by the marginal utility of the commodity to him. Similarly, the seller has a minimum below which he would not accept as the price of the commodity, this minimum is determined by the marginal supply. The buyer will try to pay as little as possible and the

seller will try to charge as high as possible between these limits of maximum and the minimum. The actual price would, therefore, be fixed somewhere in between the two, the relative urgency as well as the strength of the bargaining power of the buyer and the seller being the determining factors.

Marginal Supply price and expenses of production.—In an earlier section we have discussed the several causes that work behind a supply price. The real cost of production, the expenses or the money cost of production, the utility to the seller, and estimate of the utility of the commodity to the buyer are the four causes that were mentioned. Out of these causes which cover all possible cases of sale, the cause relating to the money cost of production is of the greatest practical importance in modern times where goods are produced for the market. Generally, every seller has incurred some expenditure in producing the article he is going to sell and hence the supply price which he wants to charge for the commodity is related to his expenses or money cost of production. We want to examine this relationship between the supply price and the money cost of production a bit in detail. We shall examine this relationship under conditions of perfect competition.

Implications of perfect competition.—Let us first explain the implications of a perfectly competitive market. A perfectly competitive market is one where first there is no restriction on the movement of factors of production and secondly there is also a large number of buyers as well as sellers so that the action of any one of them produces no effect on the market as a whole. Every buyer represents such a small fraction of the total demand in the market that to whatever pitch he may raise his individual demand, in comparison to the whole it is nothing and therefore produces no change in price. In other words, at the same price any one buyer can purchase the commodity in question in as much quantity as he may think necessary because even his maximum would be a very small part of the total demand. Similarly, the individual seller can sell any amount of commodity in a perfectly competitive market without affecting the price. The position of the individual buyer or the individual seller can be diagrammatically represented by drawing the individual's demand or supply curve parallel to axis as given below. It would show that any amount of the commodity may be demanded or supplied at the same price, OP.

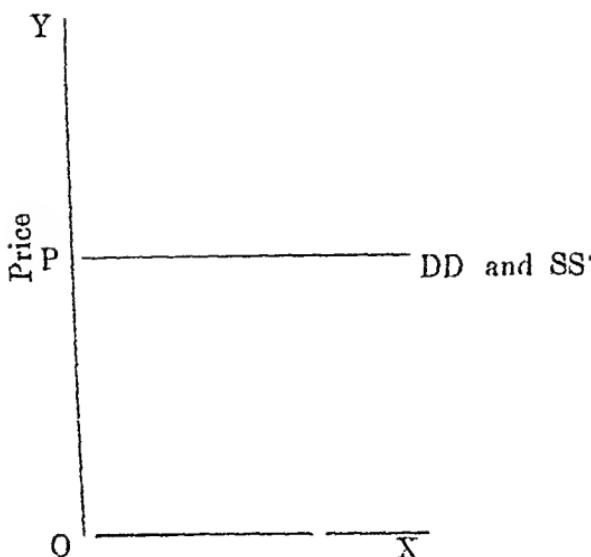


Fig. 8.—Quantity demanded and supplied.

Cost of production.—Let us now discuss the concept of cost of production. It can be approached from two points of view. First, the point of view of real effort and sacrifice involved in producing a particular commodity. This is the point of view of what is technically called 'the real cost of production' in which reference is to actual labour and sacrifice involved in producing a certain commodity. In the words of Marshall real cost of production may be explained thus : " The exertions of all the different kinds of labour that are directly or indirectly involved in making it; together with the abstinences or rather the waitings required for saving the capital used in making it, all these efforts and sacrifices together will be called the real cost of production of the commodity." Money cost or expenses of production, on the other hand, refers to the actual sums of money that producers have to spend over different factors of production in order to attract them into business. It includes all expenses of production including normal profit also Money cost of production is divided into supplementary cost and prime cost. Supplementary cost is one that is more or less fixed and permanent irrespective of the scale of production existing. The salaries of the manager and the office staff, expenses on account of light, depreciation, interest on capital etc. come in this class. Prime-cost means those expenses over and above supplementary cost which have to be incurred in producing a commodity. The expenses on account of raw material, and wages, as well as fuel would come in this class. Prime-cost ceases even when the business stops working for the time being. In real life the line of demarcation between these two kinds of money cost is

often blurred and dim. In the discussion of the concept of money cost of production, two more terms should be explained, the marginal cost of production and the average cost of production, with their respective importance in the determination of price and profits of a producer.

Marginal expenses of production of a producer, like marginal utility, is the rate at which the total cost of production of an article increases with every expansion in the scale of its production. It is the expenses of production of one unit more or one unit less. Take a concrete illustration. Suppose 10 units of a commodity are produced at a total cost of Rs. 100/-. If the scale of production is increased from 10 units to 11 units, further suppose that the total cost goes up to Rs. 112/-. The marginal cost, in this case the cost of the 11th unit, is Rs. 12. It is the rate at which total cost has increased. It is also the cost of one unit more as we see. Similarly, if we reduced the scale of production to 9 units and thereby reduced the total cost also to Rs. 92, the marginal cost, in this case the cost of the 10th unit, would be Rs. 8 and could be found by producing one unit less. Now, marginal cost must be distinguished from average cost which can be found out by dividing the total cost by the number of units produced. When 10 units are produced the average cost is Rs. 10 per unit; when 11 units are produced it is Rs. $10\frac{2}{11}$ per unit and when 9 units are produced it is Rs. $10\frac{2}{9}$ per unit. So far as the function of these two costs is concerned, it is the marginal cost of every producer to which the price of an article tends to become equal in a perfectly competitive market, the average cost only indicating the fact whether a producer is reaping more than normal profits or not. It is only under certain conditions that marginal cost is equal to average cost also. These conditions are obtained when the industry as a whole is in perfect equilibrium.

Why marginal cost equals price under conditions of perfect competition.—We have mentioned above that under perfect competition marginal cost, which is equal for all producers in this case, tends to equal price of a commodity. Let us explain why it is so. First we shall take the case of an individual producer. Because he is producing under conditions of perfect competition by hypothesis, he can sell any amount of output at the same price. Now his aim is to make his profits maximum. For the purpose he should produce up to the point where his marginal cost equals price. If he produces more than this with the result that marginal cost becomes more than the price, he is a loser. Whatever he will gain by way of sale-proceeds would be more than lost by way of marginal expenses of production. If on the other hand he

produces less, he would get more by way of sale-proceeds than he loses by way of marginal cost of production, and, therefore, to reap the net gain thus resulting, he would naturally increase his production. It is only at the point where price equals marginal cost of production that gain and loss are just balanced and thus he would produce up to this point neither more nor less. (See the figure of individual equilibrium given below). In economics we call it the state of individual equilibrium. Now it is quite possible that the average cost of the producer may be less than the marginal cost even when his marginal cost equals price. See the diagram showing individual equilibrium). In such a case the individual producer would be earning abnormal profits represented by the difference between the total cost (Average cost \times output) and the total sale proceeds (Price \times output) the latter exceeding the former. This is shown by the area FGHP in the figure below. When such is the position new producers in this line would be attracted. This would mean increased output which would reduce price. This would continue till no body is left with any abnormal profits. All producers are now producing an output where price not only equals marginal cost but also average cost. This state of affairs in economics is known as that of full equilibrium where price equals marginal cost of production as well as average cost of production of every producer or firm. The following diagrams show the two different positions, one of them showing a case of individual equilibrium and the other of full equilibrium. In full equilibrium the size of every firm is the optimum because the average cost of production is the lowest.

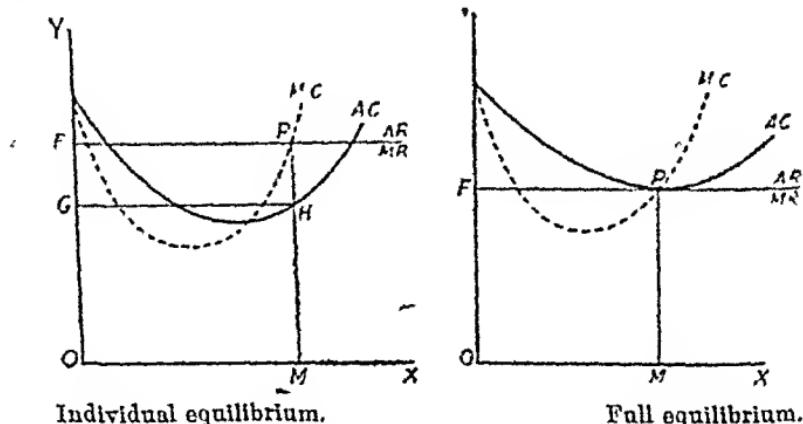


Fig. 9.

AR = Average revenue which means price. This is the demand curve of the individual seller. MR = Marginal revenue which under perfect competition is equal to AR.

Price determination in actual life.—So far, we have discussed the theory of value as applicable to conditions of perfect competition. Our conclusion has been that price is fixed at a point where demand and supply prices intersect each other. Demand price depends upon marginal utility and supply price upon marginal cost of production. Thus price is fixed at a point where marginal cost of production and marginal utility are equal. Because of perfect competition, the marginal costs of production of all the producers are also equal. Hence on the supply side price equals the marginal cost of production of each producer. This may be further explained by an example. Suppose in a market where perfect competition prevails there are three producers who bring their goods for sale. If the marginal cost of any one of them is, at a particular stage of production, less than that of the other two, he would be making more than normal profit. In other words the cost that he incurs in producing the last unit is less than the sale proceeds he gets by selling it. In such a case it would not be in his interest to stop production at that point. He would naturally produce more and he would go on doing it till the point is reached where his marginal cost of production also actually equals price. Now so far as theory goes, he should be able to do it because in case of perfect competition neither is there any restriction in the matter of factors of production to go from one place to another or from one business to another and nor would the increase in the output of an individual producer affect the price that has been already ruling in the market. But the conditions that actually are found to exist in real life are not just what the theory of perfect competition wants them to be. There, for example, does not exist an unrestricted flow of factors of production from one place to another and one industry to another. It is in other words not necessary, that even when my marginal cost of production is less than the price that rules in the market, I should be able to expand my scale of production up to the point where marginal cost and price would be equal. Therefore in actual life we find that all the producers who are producing for the same market do not have the same marginal cost of production. There are some whose marginal cost of production is more than that of others. And still production by all of them is necessary to meet the total demand of the market. Lack of perfect flow of factors of production prevents the more efficient producers to expand their production and weed out the less efficient ones. This means that to suit the conditions of real life the theory of value has to be modified. And price in such a case where different producers with different marginal costs are producing must equal the marginal cost of production of

the most expensive or inefficient producer. But this is not the only point that deserves mention. In actual life we also find that every producer is in a position to affect the price prevailing in the market by his decision to sell more or less. It means the other conditions of perfect competition that the number of buyers and sellers is so large as to make it possible either for the buyer or the seller to purchase or sell as much or as little as he likes without bringing about any change in price, is also absent. This requires another modification in the theory of value as enunciated in a previous section with reference to perfect competition. When every seller is in a position to affect price in the market, it is not the marginal cost of production that equals price but it is the average cost of production which does when the industry is in a state of full equilibrium. It means when both the conditions of perfect market are absent, price would equal not the marginal cost (as it would do when though unrestricted flow of factors of production does not exist, yet no one buyer or seller is in a position to affect price) but the average cost of the most expensive producer.

From the foregoing discussion it is clear, therefore, that the theory of value as applied to perfect competition does not fit in with the conditions of actual life and needs modifications. And in spite of their making the subject a little difficult for the student, the modifications suited to conditions of an imperfect market have been referred here. The student in no case should forget that the general explanation of value that on the supply side it equals the marginal cost of the most expensive producer is not one that is true to the conditions of perfect competition but is one that would hold true when only one of the conditions of perfect competition holds good whereas the other about unrestricted flow of factors of production does not. In actual life even such situations may be found to exist.

Element of time in the determination of Price.—Price is the result of the working of the forces of demand as well as price. The question, however, arises about the relative importance of the two factors in this connection. Whether demand plays a more important part or supply, no one answer can be given to this. The element of time enters at this point and the relative importance of demand and supply differs with the period of time in view. From the point of view of time, markets may be classified as the short period and the long period or Normal markets. What is meant by short period and what is meant by long period would vary from one case to another. The distinguishing feature of a short period market is that the supply of the commodity is fixed to the existing

stock whereas in the long period the supply can be varied to meet the demand. Now in case of short period market price is more influenced by demand than by supply. Suppose on any particular day demand for fish goes up. The only effect it can have is to raise the price of the fish in the market because there is no question of increasing the supply of fish to meet the increased demand. Similarly if for one reason or another demand goes down, the price would fall because the whole of the stock must be disposed of on the very day, fish being perishable commodity. From this extreme example it is clear that it is the force of demand that plays an active role in the determination of price in short periods the chief feature of which is the non-adjustability of supply. But as supply becomes more and more adjustable, its role in the determination of price also increases. Ultimately we reach the long period market where supply can adjust to demand. Therefore price tends to become equal to the marginal cost of production, because if price is less than the marginal cost supply will be curtailed, and if it is more than marginal cost supply will be increased and it would come to rest where it equals marginal cost of production. The price so determined is known as the normal price and the short period or the market price has always the tendency to move around the normal price. In actual life normal price is never the price which on any day rules in the market. But it represents the ideal to which market price seeks to approximate. If market price at any moment is higher than the normal price, the supply of the commodity would be increased to avail of the high price till it once more comes near to the normal price. Similarly if market price is lower than the normal price, supply would be reduced and market price would register a rise. It is in this sense that the statement that "market price oscillates round the normal price" is made.

We have mentioned how the relative importance of demand and supply varies in the determination of value with the time factor. Demand is important in the short period whereas supply in the long period. But this should not be taken to mean that in any period any one of the two factors only governs value. For determination of value the existence of both demand as well as supply is essential, though at one time one may assume the active role and at another time another. Marshall in a picturesque language says : " We might as reasonably dispute whether it is the upper or the under blade of a pair of scissors that cuts a piece of paper, as whether value is governed by utility or cost of production." Marshall in the end comes to the conclusion that truth is that demand and supply both determine value and not any one of them only.

The element of time is important from another point of view also. As we have seen cost of production can be classified under prime-cost and supplementary cost. A producer when he is thinking of short period only may have to adjust to falling demand ; be satisfied with charging only prime cost plus as much of the supplementary cost as possible. But in the long period price must cover both the prime and the supplementary cost, that is, the total cost.

So far we discussed the importance of time from the point of view of supply only. But in constructing the demand schedule for a commodity the time element is of importance. A commodity in the short period may have one demand schedule and in the long period, when it has been fully advertised and people have taken to it, it may have quite a different demand schedule. Thus element of time plays a very important part in the study of value.

Changes of demand and supply on value.--Demand and supply jointly determine value, has been mentioned more than once. Let us in brief examine how changes in demand and supply would affect price. The ultimate effect will depend upon elasticity of demand on one hand and the law of production on the other. Suppose the demand for a commodity registers an increase. This increased demand will have no effect on price if the commodity is produced on the basis of constant returns ; it would rise if the commodity obeys the law of diminishing returns ; and it would fall if the commodity obeys the law of increasing returns. The fall in price will be considerable if increasing returns are accompanied. Similarly under diminishing returns and inelastic supply the rise in price would be equally great. It is thus clear that elasticities of demand on the one hand and the laws of production on the other have profound effects on the price of a commodity.

CHAPTER XX.

MONEY.

Money defined.—We have already remarked that present economy of the world is an exchange economy. We produce not for our own consumption but for sale and it is with the sale-proceeds that we receive in form of money that we purchase the various commodities we require to satisfy our numerous wants. Thus money occupies a central place in all discussions of exchange. Let us clearly understand, therefore, what we exactly mean by money.

“ Money is a common medium of exchange which people accept in final settlement of their claims.” In this definition two points are stressed. First, money has the characteristic of being commonly accepted by all as a medium through which exchange takes place. But this is not enough. Money must possess a second characteristic also, that of being treated as a means of final settlement of all accounts. This latter qualification to be fulfilled money must have, legal sanction behind it. Therefore “ money is that commonly accepted medium of exchange which has legal validity in being offered as payment for our debts and obligations.” In India the silver rupee and the Reserve Bank notes would come under the category of money. They are accepted by all persons without the least hesitation and no one can refuse them to accept in final discharge of his dues. To refuse them to so accept would be an offence against law.

It is also necessary at this juncture to distinguish money from currency. Currency is a modern term than money and includes within its scope all kinds of medium of exchange, having legal validity as means to settle claims finally or not. Thus cheques, hundies, and bills of exchange would also come under the category, currency.

Evolution of money.—As the inconveniences of barter become increasingly important with the development of man's economic life, need for one common medium of exchange came to be more and more felt. This ultimately led to the emergence of money. Money thus has a long history behind it. Its form has undergone change after change till we come to the present time when money takes either the form of metallic coins or paper notes. Furs and skins in the hunting stage, sheep and cattle in the pastoral stage, and corn and ‘kawries’ in the agricultural stage, and later on other articles as cotton, ‘cloth and salt have been used as money. But ultimately all of them were discarded because of their unsatisfactory nature as money commodity. A commodity to be used as money, must possess

certain characteristics and gold and silver are the two precious metals which have these characteristics in simple measure. Hence their universal preference as money material even to this day. Before discussing these qualities of a good money material, let us mention more precisely the functions that money performs.

Functions of money.—Money has four well-known functions. First, it is a medium of exchange. If I have surplus of corn and want to have in exchange for it cloth, books and spices, the procedure that I would adopt is to sell my corn for money and then with the help of this money to purchase cloth, books and spices. The same thing applies to all other cases of exchange. Thus money becomes a common medium of exchange. This automatically leads to its second function of being a common measure of value. When all persons exchange their goods and services in terms of a common good, known as money, their value is expressed in it and hence comparison between them becomes easy. Comparison between the value of my pen with my friend's painting is easier because the value of both of them is expressed in rupees annas and pies. If my pen costs me ten rupees and the painting twenty rupees, it is obvious that the value of painting is twice that of the pen. The third important function of money is that it serves as a store of value. If I have surplus of corn at my disposal then to store it would be not only inconvenient but also unprofitable because as time would pass it would deteriorate and lose in value. But I can sell the same corn in the market for money and store it without any difficulty or loss in value. Hence money is a good store of value also. And lastly, money acts as a standard of deferred payments also. In a modern community, most of the trade and industry is carried on on the basis of borrowed capital. The borrowings take place in form of money and are returned in money. This does not mean any loss in value either to the borrower or the lender because the value of money is generally stable but if borrowings had taken place in the form of any other goods then, because their value would generally undergo some change, one or the other party must have suffered in value. Money is a good means for deferred payment for another reason also, that it is a common medium of exchange and hence one who borrows money can make use of it for any purpose he likes. These then are the four well-known functions that money performs.

Qualities of a good money material.—Any commodity to be used as money must possess such qualities as are necessary for performing the functions that money performs. These qualities may be classified under the following heads : , , ,

(i) Large value in proportion to small bulk.—This would make them easily portable and convenient to handle. Money must possess this attribute.

(ii) Common acceptability.—Money has to function as a medium of exchange. Therefore if it is made of a commodity like gold or silver which even as commodity commands universal acceptance, it would be all the more suitable to perform this function and be used for money. In modern times government sanction behind money is quite sufficient to make it commonly acceptable. But in pre-modern times some independent value in money commodity was necessary.

(iii) Durability.—This is also an essential quality to prevent money from deteriorating or losing value by lapse of time only. In the absence of this quality it would neither be a store of value, nor a common medium of exchange because in the course of transmission from one hand to another it would lose value.

(iv) Malleability.—This is also a necessary quality for a good money commodity so that it may be easily melted and given any shape thought to be necessary. But we should not forget another fact that the material should not also be very soft, otherwise it would not last long. We find gold and silver possessing this attribute.

(v) Homogeneity.—It means that different units of a commodity are exactly similar in quality so that their values also may be the same. Obviously this is necessary in case a commodity is to be used as money material. Gold and silver have this merit.

(vi) Divisibility.—It means that the material to be used as money must be capable of division into as many parts as required without losing its value. If a diamond is cut into two, we suffer in value tremendously because the two pieces cannot be joined together again. But gold and silver can be divided into as many parts as necessary and again be combined into a smaller number of them by melting them and giving them the required shape. In this process no loss of value will take place.

(vii) Cognisability.—This means the quality of being easily recognised. Gold and silver coins can be made of uniform shape and hence they can be easily recognised. This facilitates detection of fraud which can, therefore, be minimised.

(viii) Stability.—It is an essential quality of good money that its value should remain relatively stable because frequent and substantial changes in the value of money means great disturbance to trade and industry and hardship to some classes

of people and undeserved advantage to others. Therefore it is necessary the value of material to be used as money must remain stable. Because the yearly output of gold is very small in comparison to its total stock, it has been thought that the value of gold would remain stable. But, as recent years have shown, this is not necessary. Even value of gold has undergone great fluctuations.

These then are the different attributes that a good money should possess and as it was thought that gold and silver possess these various qualities in ample measure, therefore, they are the most suitable material for money. But now the opinion of economists in this respect is much more divided and precious metals have certainly been dethroned from that position of unchallenged supremacy which they possessed in the past. Still their advocates exist in quite as good number even now.

Kinds of money.—Money can be divided into two broad divisions :—(i) Metallic money (ii) Paper money. The former refers to money made of one kind of metal or another. Gold, silver, copper are the metals generally used for this purpose. The latter refers to currency notes having legal sanction. In India Reserve Bank notes belong to this class.

Metallic money.—We shall discuss metallic money in some detail now. Metallic money takes the shape of what are called coins in modern times. It was, however, not so in the past. In the beginning mere pieces or ingots of metal of a given weight were used as money. But there was always the danger of clipping (cutting away of small particles of metal) and abrasion (putting a large number of coins in a bag and shaking

them so violently that small particles of metal may be separated from those pieces and collected). To remove those risks, metal began to be coined in a regular shape. Afterwards it was also thought safer to get the edges milled so that clipping may be impossible. It is thus that metallic money has come to assume the shape of a modern coin. This art of making coins is called coinage and the place where coinage takes place is known as mint. In all civilized society minting is the sole right of the state. All modern coins have on them printed their face value and coins with the same face value are not only uniform in shape but also in weight and fineness. They are impressed with some complicated design so that counterfeiting may be checked. In spite of all these precautions, even now counterfeit coins are not altogether unknown.

Coinage.—Coinage may be either *free* or *limited*. Under a system of *free coinage*, mints are open to the public. Any one may take the metal in required quantity and get it converted into coins at a fixed rate. In India up to 1893 mintage was free and in England up to 1931 it was so. Where the government does not charge anything for the work of minting coins, coinage is said to be *gratuitous*. Where the government makes a charge for minting and the charge is equal to the actual cost of minting, it is called *mintage or brassage*. But in many cases the government does not charge only the actual cost of minting but also something over and above it. This extra charge is known as *seigniorage*. There are two ways of making this extra charge. One is to make a separate charge for this purpose. The second one is to take away as much pure metal from the coin as would pay for the charge and in its place mix some inferior metal in the coin.

Limited coinage exists where the state only has the sole right of minting coins on its own account. The mints are not open to the public as in case of free coinage. After 1893 in India the system of limited coinage has existed. It is the government of the country which decides according to its own estimate of the country's needs how many coins of different values are to be minted.

Standard and token coins.—Coins may be of any of these two kinds. Standard coins are those whose face value is equal to their intrinsic value also, so that if the coin is melted down and sold in the market as metal, it will fetch a price which will be equal to its face value. Such coins are also called full-bodied coins. Standard coins are always unlimited legal tender though it is not necessary that all unlimited legal tender money must consist of standard coins only. In India none of the unlimited legal tender money is standard coin. Paper mo-

which is given the character of unlimited legal tender is also not standard coin. Standard coins also have a free coinage.

'Token coin' is different from standard coin. First, its face value is more than its intrinsic value as metal. Indian rupee is a good example. The silver content in the rupee when taken out by melting and sold in the market would not bring annas sixteen as its price though the same silver in the form of a rupee has a higher value of sixteen annas. Token coins are generally made of a metal different from that a standard coin is made of and perform the function of subsidiary coins. Hence they are not unlimited legal tender, but in the case of our rupee which is also a taken coin this is not so. It is neither limited legal tender nor a subsidiary coin. Hence the essential characteristic of token coin is that its face value is more than its intrinsic value. The coinage of token coins is generally limited but our rupee before 1893 was an exception to this also.

Token money is a little different from token coin, the former covering besides token coin also paper money because the latter's face value is much more than its intrinsic value which is practically nil. Thus our Reserve Bank note like all unlimited legal tender paper currency is standard money on the one hand and also token money on the other. But standard coin and token coin are not the same.

Paper money.—So far we have discussed metallic money. But in all modern countries with the growth of trade commerce and industry and to help this growth, paper currency in the form of Government or Central Bank notes has also come into existence. Before the establishment of the Reserve Bank of India, it was the Central Government of our country which issued paper currency. But since 1934 when the said Bank was formed, this function has been transferred to it. The growing popularity and importance of paper money in the modern economic world are due to a number of advantages that paper money possesses. But with these advantages, it also has certain disadvantages. We shall, therefore, discuss the advantages and disadvantages of paper money.

Advantages of paper money.—Paper money has certain obvious merits. First and foremost among them is that it is economical. To issue a metallic money you require the metal of which coins are to be minted. But to issue paper money you require paper only. The cost of any metal is certainly much more than the best kind of paper used for paper money. Then paper money is very convenient. It can be easily sent and carried from one place to another. It has tremendous with practically no bulk. Compare a currency note

of Rs. 10,000 with 10,000 rupees coins and you would at once realize the difference in convenience between the two. When paper money becomes popular, that quantity of metal which would have been used for monetary purposes is now released to be used for other more productive purposes of helping country's trade and industry. These in brief are the various advantages of paper money.

Disadvantages of paper money.—The only disadvantage of paper money is that if its issuing and controlling authority does not exercise proper discretion and yields to the temptation of printing more and more money, the value of proper money may go down and much economic hardship may thereby result. Though there have been examples in the monetary history of the world, for example in Germany after the last war or in India during the present war, where the government of the country has made undue use of the printing machine, it is quite possible to avoid such situations by making adequate provision for control. Another disadvantage of paper money was said to be this, that because there was no intrinsic value, therefore, it would not be popular amongst the people. But experience has not validated this fear. First it is the credit of the government which stands at the back of all paper money and so long as people have confidence in the government, they have no hesitation in accepting paper money without any hitch. Secondly, even in the case of paper money there exists some metallic reserve at its back. Thus the disadvantages of paper money on the whole are not very formidable and a properly regulated paper money is the first condition of economic progress in a modern country.

Convertible and inconvertible paper money.—In some countries the authority, Government or the Central Bank, issuing paper money also takes the responsibility of converting it into standard coin on demand. Thus Reserve Bank rupee notes in India are so convertible, except the one-rupee note issued during war time. For this purpose the Paper Currency authority keeps adequate reserve in gold, silver and gold and silver coins. What percentage of total paper money is thus covered by gold, silver and gold and silver coins would vary from country to country. Several considerations hold good in deciding this reserve. What percentage of paper money can be tendered for conversion at any one time, is one guiding factor. The state of public opinion and popularity of paper money in it are other guiding factors. That portion of paper money against which metallic reserve is held is called *covered issue* and the rest is called *uncovered or fiduciary issue*.

Inconvertible paper money is that which the issuing authority is under no obligation to convert into standard coins. One

set of rupee notes of the Government of India issued during this war is such a money. Similarly, after England went off the gold standard in 1931, the sterling paper note has been inconvertible paper money. The greatest danger of inconvertible paper money is that it can be issued to any limit if the government so desire. Proper control and discretion on the part of the issuing authority are the only safeguard in such a case and more often than not such safeguard is observed.

Gresham's Law.—Queen Elizabeth of England was faced with a currency problem. English coins at that time had deteriorated either through wear and tear or through fraudulent interference on the part of the people who clipped off metal from them. The queen wanted to improve matters by issuing more and more new currency but every time she found that the new currency went out of circulation. Sir Thomas Gresham was consulted and he explained the matter by enunciating a law which since that time has come down as an important monetary law. Sir Thomas said "Bad money always has the tendency to drive good money out of circulation." By bad money Sir Thomas at that time meant only that money which had lost in weight. But the law is applicable to two other situations also. If coins of two different metals circulate in a country as unlimited legal tender, and if their relative legal value is not in keeping with their relative value as metal, then the over-valued coin is a bad money and will drive out good money which in this case is the under-valued coin. Suppose gold and silver coins are unlimited legal tender, and their legal ratio of exchange is one gold coin equal to fifteen silver coins. But suppose the gold contained in the gold coin if sold in the market would purchase more metal than is contained in fifteen silver coins. This shows gold coin is under-valued and is good money and silver coin is over-valued and is bad money and the tendency would be for the silver coin to drive out of circulation the gold coin. There is a third situation also where this law will have its application. If there is inconvertible paper money, which due to over issue has depreciated in value, circulating side by side with good metallic money, then the former will have the tendency to drive out of circulation the latter.

This tendency of the bad money to drive out good money exists for a number of reasons. First, many people like to hoard money. Naturally good money would always be preferred for the purpose. Secondly, if money is to be exported to a foreign country for payment of debt, it is obvious that good money having greater value as metal would be preferred for the purpose because in foreign payments the value of coin would be according to the value of actual metal present in it.

and not face value. Similarly if money is to be used for any other non-monetary purposes such as for ornaments, it is good money which would be melted because it would yield more metal. Hence the tendency of bad money to drive out good money can be easily explained because as money both are equally good but as metal they are not.

There are few exceptions, however, under which the Gresham's law would not operate. First, if the total quantity of money in a country is short of its full requirements, the bad money would not drive out good money for the simple reason that both good as well as bad money are required for being used as medium of exchange and hence none can be spared for non-monetary purposes. Secondly, if the bad money is really so bad that the people refuse to accept it, then also it will not drive good money out of circulation because it is good money only which will be accepted as money by the people and hence it would not be spared for non-monetary purposes.

Lastly, we must remember that the law applies to different kinds of money serving the same purpose but not to those serving different purposes. For example, between standard money and token money the law has no applicability, because token money as subsidiary money has a different service to perform from the one the standard money does.

The Quantity Theory of Money.—The quantity theory of money discusses the relationship that the quantity of money has with price level in a country. In other words, it is the theory which tries to explain this relationship. The fact that any relationship should exist between the quantity of money on the one hand and the general price level on the other is not difficult to understand. Price as we have seen is nothing but the value of a commodity expressed in money. And the general price level therefore shows the purchasing power of money as a whole and not in relation to any particular commodity. It should be clear now that the quantity of money existing at any time must bear a certain relationship to its purchasing capacity in general or the general price level. How much goods in general a unit of money at any moment may purchase shows the value or price money in terms of goods. Therefore, the value of money like the value of any other commodity must depend upon its supply on the one hand and demand on the other. The quantity theory of money does not attempt to do anything more than explain this interaction of supply and demand of money in the determination of its value. Let us discuss the theory in some detail.

The most elementary statement of the theory would be that the value of money varies, exactly in an inverse proportion with its quantity, the demand for money remaining the same. Before taking a concrete example to illustrate the theory let us make two things clear. First, the meaning of the term demand for money. Money essentially is a medium of exchange. It has demand for no other purpose except this. Therefore the total number of exchanges that is to be effected at any time in a community determines the demand for money of that community. The exchanges to be effected are not a fixed number. They change from time to time. When business is active, there are more exchanges to be effected and demand for money increases. After harvests are cut, in our country business activity greatly increases and so does the demand for money. That is our busy season. On the other hand when the crops are growing in the field the exchanges to be effected go down, business is slack and demand for money is relatively less. The second point is about the quantity of money. To calculate the exact quantity of money it is not only the physical number of coins which matters but also its efficiency. In other words the rapidity with which money passes from one hand to another or what is called the velocity of money, is also to be taken into consideration in determining the effective quantity of money. If one rupee affects hundred exchanges during a day, it is clear that one rupee is performing the function of not one rupee but of hundred rupees and while estimating the quantity of money it must be counted as such. Now according to the quantity theory of money the general price level in a country is determined by the quantity of money present, given a certain demand for money. If the general price level prevailing in a country at any particular time is 100, and if the quantity of money is doubled but no change takes place in the demand for money, that is to say, the number of exchanges to be effected remains the same as before, then the general price level in the country must rise to 200 from 100. Thus rise in price is just in the ratio in which the quantity of money has increased. Professor Irving Fisher, a well-known American economist, expressed these relations in the form of the following equation :—

$$P = \frac{MV}{T}$$

P=General Price level.

M=Money in circulation.

V=Velocity of money.

T=Trade demand for money

Later on a few refinements were made in the theory. In a modern economic society it was seen that most of the exchanges are effected through the medium of bank money, that is, cheques and other credit instruments as Bills of Exchange. Therefore to calculate the total quantity of money in any country, to take account of the legal money only would not do. Cheques and other credit instruments must also be included. Hence the total quantity of money would mean money and credit instruments multiplied by their respective velocity. The above formula was also naturally modified to meet these refinements and came to be expressed in the following manner :—

$$P = \frac{MV + M_1 V_1}{T}$$

M_1 = Crédit money.

V_1 = Velocity of credit money.

Thus the price level is determined by dividing the total volume of purchasing power by the total quantity of business.

We have given in substance what is known as the quantity theory of money. Modern economists have attacked this theory and these criticisms may be grouped under three headings. First of them says that in the theory the advocates over-emphasised the factor of quantity of money in determining the price level of a country. It is always not the fact that a change in price level is a mere result of a certain change initiated in the quantity of money. The critics pointed out that many times a change in the quantity of money is only a result of a change in price level caused by a change in business activity. In a period of trade activity rise in prices takes place because demand for labour and equipment outrun the supply. And the quantity of money increases to adjust itself to the new situation. Similarly, in a period of slackness price falls and the quantity of money also falls. This means that changes in price level are equally caused by needs of business and not only by quantity of money. Secondly, it is also argued that the value of notes and bank money may be altered independent of changes in the quantity or the amount of business though according to the quantity theory of money it could not be so. However, it so happens because confidence of the community for certain political or other reasons may change in paper money and if the change is towards shaking their confidence, the value of paper money may fall though there has taken place no change either in the quantity of money, or in the business demand to justify that change. Lastly, it is also said that the quantity of money produces its effect on price level not directly but indirectly through its effects on interest rates. If the

quantity of money increases, it would lead to more and more loans to the borrowers which would result in a fall in interest rates. This fall in interest rates would be an incentive to producers to make more and more investments as money can be had cheaply. More investments would mean greater business activity and business activity as remarked above would result in a rise in prices. Thus it is through such a long and indirect process that increased quantity of money would affect prices. Conversely, a decrease in the quantity of money would reverse the whole process—restricted loans, increased interest rates, decreased investment, slackness in business activity, and falling prices.

So far as these criticisms go, they are valuable in pointing the well-known truth that like values of other commodities, the value of money is not only determined by demand and supply of money but also in its turn determines the demand and supply of money. In simpler words, in this case also demand, supply and price are interdependent in the sense it is in the case of other commodities as discussed more fully in a previous chapter. But we should not under-rate the importance of quantity of money in determining general price-level which is sufficiently great.

CHAPTER XXI.

MONEY (*continued*).

Value of money and importance of its stability.—We have referred on more than one occasion to the term value of money. Let us explain it. We know what value in economics is. Value of a commodity means the capacity of that commodity to command another commodity in exchange. This capacity of a particular commodity is not the same for all other commodities. Hence, the value of a commodity is different in case of different commodities. Price is value in relation to a specific commodity, money. So price of a commodity means how much money that commodity can command. Now, just as every commodity has its price or money-value, similarly money also has its price or commodity-value. Here, however, a complication arises. Price of all commodities is expressed in terms of a single commodity only and hence every commodity has only one price. But when price of money is to be expressed there arises some difficulty. Price of money means the amount of commodity money can command. But there is not only one commodity in the world. There exist hundreds and thousands of commodities and the question arises in terms of which out of all this lot of commodities the price or value of money is to be expressed. Our answer to this question is this. It is not in terms of any particular commodity that the value of money is to be expressed. The value of money is expressed in terms of commodities in general. Therefore, when we say that value of money has gone up it means that on the whole one unit of money purchases more commodities than it did beforehand. So far as any particular commodities are concerned it may be that it may actually be purchasing less of them. Similarly, when we say the value of money has gone down it means that it purchases less commodities on the whole than it did beforehand, though anyone or more commodities it may actually be purchasing in greater quantities. It is obvious that if value of money rises price level in general falls and vice versa.

Now the importance of maintaining not absolute, or rigid but relative stability in the value of money or general price level is very necessary. It means that value of money should not undergo abrupt changes either on the side of increase or on the side of decrease. Before explaining this point at length, let us at this juncture introduce some technical terms which are used in connection with changes in the value of money. They are : Inflation, Deflation, Reflation, Over-valuation, Under-valuation, Expansion, Contraction, Appreciation, and Depreciation.

Take 'inflation' first. We have seen that there is such a thing as demand for money which depends upon the business activity on the one hand and the extent to which money economy has replaced the barter-economy on the other, because, the greater the prevalence of barter in a commodity, the lesser is the demand for money of that commodity to effect a certain number of exchanges. Now, supply of money at a given time, let us suppose, is in a state of normal adjustment with the demand for it. It means the supply is in balance with the demand, neither any shortage is being felt nor any surplus. If however, this state of adjustment is disturbed either by deliberately increasing the supply of money or by deliberately decreasing it though the demand for money has not changed, we have what is called inflation in the first case and deflation in the second case. So the terms inflation and deflation have association with the legitimate demand for money. There are various reasons for which the state or the Central Bank, whichever is the monetary authority of the country, makes the deliberate increase or decrease in the quantity of money. Suppose the government require more money for a certain purpose, say, to finance war. It can get in normal course this money either by imposing greater taxation on the people or by borrowing money from them. Suppose the Government has not the courage to do the former for fear of public resentment and has no hope for any possibility of success from the latter. It may then adopt this back door method of getting more supply of money for itself. During the war, the Government of India has done so. The effect of inflation is a fall in the value of money or rise in prices and this is called depreciation of money. Similarly a government in order, say, to keep the value of its money on par with foreign countries or at a certain level with the value of gold may reduce the supply of money without demand for it being reduced. This is deflation and its effect is a rise in the value of money or fall in prices and this is called appreciation of money. Thus we have explained inflation and depreciation and deflation and appreciation of money. Now reflation means increasing the supply of money with a view to correct the effect of past deflation. Thus reflation also leads to depreciation of money from the level it starts. Reflation has to be distinguished from inflation, the aim of the former being to take down the value of money to a former level and the effect of the latter being to reduce the value of money to new levels. Now, contraction and expansion are not used in relation to any precontemplated aim. Whenever the supply of money is reduced we call it contraction, whenever it is increased we say it is expansion. They are innocent and colourless words. It

is also not necessary that expansion of currency may result in depreciation and contraction in appreciation. If expansion is in response to demand no change in the value of money need take place, if it is more than demand it may lead to depreciation of money ; and if it is less than demand it may still leave the value of money appreciated. With contraction also just the same thing is true. If it equals reduction in demand for money no change would take place ; if it is more than the demand justifies, it may lead to appreciation of money ; and if it is less than needs of demand require, it may still leave the value of money depreciated. The term over-valuation and under-valuation have psychological associations and indicate effects or results like appreciation and depreciation. When the value of money falls more than its inflation actually justifies because community's confidence in it has been shaken, we say there is under-valuation of money. In other words people value it less than it should be in fact valued. Over-valuation is just the reverse. When money comes to command special confidence and appreciation in its value takes place more than it is actually justified by its supply we say it is a case of over-valuation. People, that is to say, put upon it more value than facts justify.

Having discussed these terms we revert to the next point as to why relative stability in the value of money is desirable, in other words, why appreciation or depreciation of money is an evil. Let us examine their effects.

It is a fact that money is a medium of exchange and hence what is the quantity of money that a person has is absolutely of no importance so long as in terms of purchasing power his position does not change. If my monthly income is Rs. 200 per month at present when a certain price level prevails ; suppose the price level rises to the double of its previous level and if with this rise my money income also rises to Rs. 400 a month my position really does not either go worse or better. The same result would accrue when income contracts just in proportion to fall in prices. If appreciation and depreciation in the value of money in practical life had decreased and increased the quantity of money which individuals possess in the same proportion in which appreciation or depreciation have taken place, either appreciation or depreciation would have no evil effects. But fortunately or unfortunately this does not happen. Changes in the value of money affect different classes in society differently and bring about a redistribution of purchasing power, and it is this thing which produces bad effects and disturbs the economic life of a community.

We shall take examples. When inflation takes place and the price as a result rises, the middle class people and the wage-

earning population are 'the worst' sufferers, because their incomes remain fixed while because of rise in the prices of the commodities their cost of living increases. Businessmen and industrialists, the rich classes in society, reap profits due to increased business and industrial activity and thus grow richer. Similarly, debtors gain and creditors lose because debt payments are made in money which has depreciated in value and hence the debtor returns less purchasing power to his creditor in cancellation of his debts than he actually got from him. Consumers also as a class are losers because prices have gone high. Thus all around there is disturbances and ultimately the pendulum swings to the other extreme. Instead of business activity depression sets in and inflation gives place to deflation.

The effects of deflation are just the reverse, the industrialists and business men make no profits. This means depression of economic life, unemployment of the people; consequently, deficits for government budgets and pessimism everywhere. Wages are reduced though not to the same extent as prices have fallen because of effective labour organisation. Creditors gain at the cost of debtors and consumers at the cost of producers. The middle class with their fixed incomes are at an advantage.

From the above description it is more than clear how appreciation and depreciation of money are undesirable phenomena in a community's economic life. They must be avoided. In other words maintenance of relative stability in the value of money is necessary. We shall see how this is possible.

The problem of monetary standards.—We have seen why it is important to keep the value of money relatively stable. It is for maintaining this stability that a country adopts a particular standard of money. By standard of money we understand the basis in relation to which the value of money is fixed by law. If gold or silver or both are on such a basis we have a metallic standard. But sometimes no external metal is used as a basis and the value of money is tried to be kept at a more or less stable basis by regulating its issue. This is known as the managed standard. When a metallic standard is adopted the objective is to link the value of money to such a metal as shows few fluctuations in its value. Gold and silver have been regarded such metals and the value of money has been fixed by law to one or both of them so that it may also not fluctuate. We shall now examine a bit in detail the different standards that the world has adopted at different times.

Gold Standard.—The essence of gold standard is that the value of money in the country having such a standard is fixed

in terms of gold. For example when England was on the gold standard the pound sterling consisted of 123½ grains of English standard gold, 11/12 fine. For this purpose it is necessary that the currency authority is under a legal obligation to purchase as well as sell gold at fixed rates. The buying and selling prices may be slightly different. Thus the buying price of one standard ounce of gold in England was £3-17s-9d. in terms of sterling and the selling price was £3. 17s. 10½d. The result was that the market price of gold could not differ from the legal price. If market price went higher, people will purchase gold from the currency authority, the supply of gold will increase and market price will come down to the level of legal price. Just the reverse process will take place if market price went lower. Similarly freedom of export and import of gold is also an essential feature of gold standard so that prices of gold in all countries may be the same leaving margin for the cost of trans-shipment. This freedom of export and import of gold is necessary from the point of view of currency authority also which may import gold when it stands in want of it and export gold when it has a surplus of it. In the absence of this freedom, the obligation to sell and purchase gold, which a currency authority under gold standard has, would not be possible of fulfilment. Take an example. Suppose market price of gold is higher than legal price. In such a case there would be pressure on the currency authority to sell gold. To meet this pressure it must also have some source of replenishing its gold resources. Now this would automatically happen if there is freedom to import gold. How? When market price of gold has a tendency to go up, the value of money in the country being linked to gold would also be high and general price level will be lower. The country would be a good market to purchase goods, its exports would increase and gold will flow into the country to pay for them. Thus at a time when the home currency authority will be facing a demand for selling gold, by an automatic process, gold would be flowing into the country to meet this demand. The increase in the supply of gold would also increase money supply, this will lead to rise in prices and the market price of gold would also come down to the legal level as with a rise in prices the value of money would fall. Under a gold standard system, the price of gold always varies inversely with the general price level because it is linked with the value of money. Similarly when market price of gold is lower than legal price people will sell gold to the currency authority, gold will be deposited in the coffers of this authority and to relieve it of this gold there, would be soon found automatically to arise the need of exporting gold. It would be like this. When price of gold is low, general price level will be

high, the country would be a good market to sell goods and her imports would increase. To pay these imports exports of gold would be required which would raise the price of gold and again bring about equilibrium. Thus we find that freedom to export and import gold is interwoven with the working of gold standard in a country which means nothing more and nothing less than keeping the value of money at a fixed point in terms of gold. It must, however, be remarked that this functioning of gold standard is after all not so automatic as it seems. Before equilibrium is established through the mechanism of exports and imports, much time may lapse and great harm may be done to the country. Therefore, the currency authority that is the Central Bank of the country resorts to other methods of bringing about equilibrium earlier, through its bank rate or what are called open market operations. But we should stop here and not go into the intricacies. All that the student should remember is that in practice the whole thing does not function so smoothly as it appears in theory.

Kinds of gold-standard—So far we have discussed the gold standard in its general aspect. But there are various forms that it can take. First of all there is what is called the *gold-currency standard*. In Britain before the world war of 1914–18 this form of gold standard existed. Its distinguishing feature is that the gold coin is in actual circulation. British sovereign was such a coin which was the standard coin of the country.

Another form of gold standard which became popular after that world-war is known as the *Gold Bullion Standard*. It was this form of gold standard to which England returned in 1925. Under this system actual gold money is not in circulation. It is the paper money which is the medium of circulation and is unlimited legal tender and is convertible into gold bullion at a fixed price and in fixed amounts only. Thus after 1925 and before 1931 when England went off the gold standard, the Bank of England notes were made convertible into gold bars containing 400 oz. of gold at the fixed price of £3. 17s. 10½d. per ounce 11/12 fine. India was also at this standard during 1927–1931.

A third form of gold standard is the *gold exchange standard* which also became very popular in the period after that world war. The special feature of this kind of gold standard is that the internal money is not directly convertible into gold bullion but into a foreign currency which in its turn is convertible into gold at a fixed ratio. And just as there is gold-exchange standard, there can be any other exchange standard e.g., *Sterling exchange standard* if the internal money

is made convertible into sterling, as is the case in India at present; or *dollar exchange standard* if the money is convertible into dollar.

Monometallism and **Bimetallism**.—Just as there is the gold standard, similarly there can be silver standard or for the matter of that any other metallic standard if the money of any country is related to silver or any other metal. When the money of a country is related to or based on only one metal, the standard is known as monometallism. But there have been cases when the money of a country has been based on two metals, say, gold and silver. In such a case the standard is known as bimetallism. Coins made of both the metals are full legal tender and their relative values are fixed by law. The greatest practical difficulty of bimetallism is that the relationship that exists in the market values of the two metals very often may differ from their relationship, fixed by law. In such a case the over-valued money may drive out the under-valued one. The Gresham's law would begin to operate. Another condition of a bimetallic standard is the free coinage of both metals at the mints in unlimited amounts.

The Limping Standard.—It is a modified form of bimetallism, the only difference being that, whereas under bimetallism both the metals are open to free coinage, under the limping standard only one of the metals, usually gold is open to free coinage though coins of both the metals are full legal tender. This system existed in U. S. A. and France before the war of 1914-18.

Paper standard—In the end we must refer to this kind of standard also. The paper money is the full legal tender, and in circulation; and it is not related to any metal. Hence its value depends upon its supply in relation to its demand. Under such a system the greatest danger is that of over-issue of money. To prevent this over-issue very vigilant and strict control over issue of new money is required. This condition is not impossible of achievement. After 1931 England has successfully kept itself on a paper standard. In fact given the right type of control, paper standard may prove the best from all points of view including that of maintaining relative stability in the value of money.

Essentials of a good monetary standard.—Having discussed the different kinds of monetary standard at some length, it is desirable to conclude this Chapter by pointing out the main qualities of a good monetary standard. They are the following.

First, every successful monetary standard must maintain relative stability in the price level of the country.

Secondly, the system must not be so complicated as to make it difficult for the people to understand it, because it would not inspire that confidence in the people which is necessary. The gold currency and bullion standards are quite satisfactory from this point of view.

Thirdly, the monetary standard must possess a certain amount of flexibility and adjustability, because as exigencies of time and place change from time to time, changes in the quantity of money should also be possible. This elasticity is another essential condition of a good monetary standard.

Fourthly, every monetary standard must be as little expensive as possible. From this point of view gold currency standard and gold bullion standard are very unsatisfactory and the paper standard is the best.

Lastly, every provision about the monetary standard should be very clear and definite so that no vagueness exists in the minds of the people about it. The gold exchange standard when functioned in India, badly suffered from this defect. Much was left to the government's discretion and people in the country could never know from any source whatsoever all about the country's monetary standard.

These are, then, the essential qualities of a good monetary standard. Every country should adopt the standard that suits it the most keeping in view all the above points.

CHAPTER XXII.

CREDIT AND BANKING.

Credit and its importance.—In essence credit means confidence. If a shopkeeper agrees to sell goods worth one thousand rupees to me on the specific promise that I would pay the money after one month, it is a case of credit sale. The question arises why the shop-keeper granted me so much credit while he may not be prepared to sell goods worth even five rupees on promise of future payment to another man. Clearly, the shop-keeper has faith in my honesty while none in the honesty of another man. But this is not enough. Man does not put confidence in another man without any limit of money and time. I may get credit of fifty thousand rupees for two years but not more than this. Hence in economics, credit means confidence in the probity of a man limited by time and amount for which and up to which credit is granted. Hence confidence, time, and amount of money are the three factors determining the credit of a person.

In the modern world where trade and industry are run on a large scale, where production is to be carried on much in advance, and thus in the anticipation of demand, and where due to specialization exchanges and inter-exchanges take place in large numbers, credit is of vital importance. Suppose I am anxious to start a business for which I require a certain capital in the form of cash. But I possess no cash. However, my work will go on if I can induce a bank to grant me the necessary credit. When I make money out of business I may return what I got from the Bank. This clearly explains how credit can help trade as well as industry or any other productive activity. To sum up, credit plays a very important part in modern economic organization without which the wheels of economic life would clog and refuse to revolve smoothly.

Credit instruments.—To give the credit granted by one person or institution to another a practical shape, credit instruments are necessary. It is they which make credit effective. They are written documents possessing a well-defined form regulated by the law of the country. They circulate within a limited circle as media of exchange. The important credit instruments are—Promissory notes, Bills of Exchange, Cheques, Bank drafts, and Hundies.

Promissory-notes.—Promissory note is an instrument in writing containing an unconditional undertaking, signed by the maker, to pay a certain sum of money only to, or to the order of, a certain person or to the bearer of the instrument. There are only two parties to a promissory note— one who

makes the promise, the maker, and another in whose favour the promise for payment of money is made, the payee. Promissory notes are either payable on demand or at a fixed time and bear stamp according to value. The following is the specimen of a Time Promissory note.

Banasthali.

Stamp.

23rd November, 1911

Rs. 10,000 only

Six months after date, I promise to pay Miss Rajeshwari or order, the sum of Rupees ten thousand only for value received.

Daya Dulari.

Note :—Though Bank notes and currency notes are also promises of payment by either the Central Bank or the Government, they are excluded from the category of ordinary promissory notes as they are money, being legal tender.

Bill of Exchange.—Bill of Exchange is an instrument in writing containing an unconditional order signed by the maker, directing a certain person to pay a certain sum of money only to, or to the order of, a certain person, or to the bearer of an instrument. Thus there are three parties to a Bill of Exchange, the drawer who makes the order, the drawee on whom the order is made and the payee in whose favour the order of payment is made. A bill of exchange after being drawn is presented to the drawee for his acceptance. He writes the word "Accepted" across the face of the bill and puts down his signature. This is known as accepting the bill which is also then called an acceptance. The bill may be circulated before acceptance also in which case it is known as a draft. Like Promissory notes, bills of exchange are also either demand bills or time bills, the former being payable on demand and the latter at a fixed time mentioned in the bill to which however three days of grace may further be added. Bills of exchange are also classified on a different basis into two divisions—Inland bills and Foreign bills, the former being drawn and paid in the same country and the latter being drawn in one country and paid in another. The following is the specimen of an inland bill of exchange.

Stamp.

Udaipur
January 1, 1945.

Rs 500

Three months after sight of this bill, pay to Syt. Roop Narain Mathur or order the sum of rupees five hundred only for value received.

For Banasthali Vidyapith
P. C. Goel,
Secretary

To

Syt. G. N. Jhalani
Jaipur.

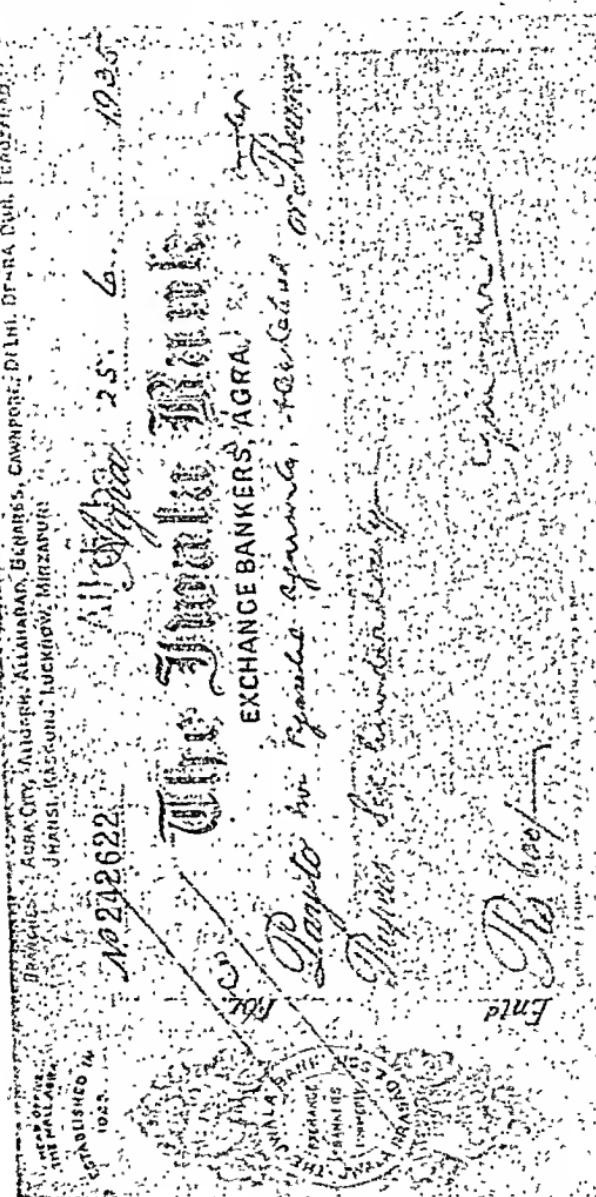
The form of a foreign bill of exchange is a little different and is drawn in a set of three, two of which are despatched to the payee by two different mails to secure safe delivery.

Bank drafts.—When a bill of exchange is drawn by one bank upon its own branch or any other bank, and which is paid on demand, it is known as a bank draft. When any person has to make payment to a distant creditor he may do so by means of a bank draft which he can purchase from a bank by depositing in it the money to be paid to the creditor plus a small commission.

Cheques —A cheque is an order made on a bank by its customer asking the former to pay on demand a definite sum of money to himself or to the person named therein or his order or to the bearer of the cheque. Like a bill of exchange, there are three parties to a cheque, the drawer, the drawee, and the payee. When any person opens a current account with a bank, he gets from the bank a cheque book. It contains a number of printed blank cheques with counterfoils. The main part of the cheque after necessary entries regarding the amount, and the payee, and the signature of the drawer are made is detached and given to the payee ; the counter-foil remains in the cheque book for reference.

Cheques are of different kinds. A bearer cheque is one which can be encashed by any one who presents it to the drawee bank. An order cheque is one which can be encashed by the person whose name is mentioned in the cheque or to any other person in whose favour the original payee has endorsed the cheque. In this case the bank is liable to ascertain that it is paid to the right person, which it is not liable to do in the case of a bearer cheque. An order cheque to be transferred from one person to another person requires endorsement of the transferor. By putting a blank or general endorsement (that is by merely signing it without mentioning the name of the transferee), an order cheque is converted into a bearer cheque. From another point of view, cheques are divided into two other categories, crossed and un-crossed. The former are those cheques whose payment can be had not at the counter of the drawee bank but through a bank only. Uncrossed cheques can be directly encashed. A cheque is crossed by drawing two parallel lines on the face of the cheque. When a cheque is sent through post it is crossed to make it more safe and minimise chances of wrong payment. When I receive a crossed cheque, I cannot go to the drawee bank and get the money personally. I must give the cheque to my own bank to which

only the drawee bank would make payment. If I have no bank account I must transfer it to some one who has it. The following is the specimen of a crossed cheque :



Hundies.—So far we have discussed those credit instruments which have come to our country with the spread of modern banking. But **Hundi** is an indigenous form of credit instrument and has been prevalent in the country since very ancient times. It is also a written order, usually unconditional, drawn by one person on another for the payment on demand or after a

specified time, of a certain sum of money, to a person named therein. It is drawn in an Indian language. Hundies are even now in common use between Indian businessmen or Mahajans. Hundis should not however be called an Indian bill of exchange because it is not exactly a bill of exchange being drawn sometimes as a conditional order also.

Hundies, like cheques and bills of exchange, are also of different classes. First, there is the 'Darshani Hund' which is payable on demand and 'Muddati Hund' which is payable after a specified time. Then there is a 'Dhanijog Hund' payable to the 'Dhani' or the bearer and 'Shah Jogi' hundi payable to a 'Shah' or a respectable person. It is like a crossed cheque. Then there is 'Firmanjog Hund' which is payable to order, and 'Dekhanhar Hund' payable to bearer.

Hundies are used for remitting money from one person to another and finance trade and industry also. Even modern banks, in special cases however, discount hundies bearing endorsement of well-known indigenous bankers.

The following is the specimen of a Darshani Hund:—

दर्शनी हुण्डी

श्री

नं० २२५

सिद्ध श्री अजमेर शुभस्थानेक श्री पत्री भाई मोहन लाल हीरालाल जोग उदयपुर से सेठ राम गोपाल प्रभुलाल कीजे श्री जी की वांचना। अप्रत्यंच हुण्डी कितां नंग एक आपके ऊपर करी। रुपया दो सौ अंकेन रुपया २००) नीमे रुपया १००) के दूना देना, यहाँ रखे भाई मोहनदास हरिदास मिती फालगुन सुदी आठें। तुरन्त शाह जोग रुपया चलन चाज्जार ठिकाना लगाय चौकस कर दाम देना। हुण्डी लिखी मिती फालगुन सुदी ८ सम्वत् १६६४ वि०

द: रामगोपाल प्रभुलाल

In the above Hund Ram Gopal Prabhulal is Drawer; Mohan Lal Hirralal is drawee and Mohandas Haridas is payee.

The specimen of a Muddati Hund is as follows:—

मुद्दती हुण्डी

श्री

सिद्ध श्री उदयपुर शुभस्थानेक श्री पत्री भाई वलधत सिह माणिक्य जाल जोग लिखी जयपुर से मध्यामल केशव राम की जय श्रीकृष्ण वांचना। अप्रत्यंच आपके ऊपर करी हुण्डी एक, १०००) रुपया अक्तरे

रुपया एक हज़ार, जिसके आधे पांच सौ के दूने पूरे यद्दी रखे, श्री मूल-
चंद करमचंद के पास। मिती कार्तिक शुक्री ५ से दिन आठ पीछे नामे
ग्राह जोग हण्डी चलन कल्दार दीजो।

मिती कार्तिक शुक्रा ५ संवत् १९६७

द्वादशतात्री.....

Advantages and disadvantages of credit.—It is necessary that we conclude a discussion on credit by describing its advantages and disadvantages.

To take the advantages first Money is essential for running modern economy. But money only is not sufficient. So far as metallic money is concerned, it is impossible and at the same time unnecessary to have as much money as the demand for trade and industry goes. Thus credit supplements money supplies. But there is another point also. The demands for trade and industry change from time to time and however flexible the system of currency in a country may be it cannot immediately respond to such change. But credit can render this service because it can be immediately expanded or contracted. If business is active there would be many cheques and bills drawn by one party upon another, if business slackens the number of cheques and bills would also fall. Then the intervention of credit instruments, which make credit effective, economise money in another way also. Suppose I import goods worth £1,000 from London, and a London merchant imports goods worth £1,000 from India. With the help of a bill of exchange both these transactions can be settled without transmission of money from one country to another. My exporter would draw a bill of Exchange upon me for £1,000 which the London importer may purchase. Thus my exporter would get money from the London importer residing there. This London importer may endorse the bill in favour of his exporter in India who would present the bill to me and take his payment. This is a very simple example and in actual life it does not happen exactly like this. Still it shows how through the intervention of a bill of exchange unnecessary remittance of money from one place to another can be avoided. Therefore the first and the foremost advantage of credit is that not only it economises the use of money in a number of ways but also imports that flexibility to total demand for currency which money alone could never do.

Secondly, credit bridges the gap that inevitably exists between production and consumption. I want a capital of Rs. 10,000 to start a business, but suppose. I have only Rs. 5,000 at my disposal. It means I cannot carry on all transactions in cash. But after sometime when goods would be produced and sold

I would get enough money. This, however, means some time and during this time credit would come to my help. Take an example. I have purchased some raw cotton from an agriculturist or a wholesaler worth Rs. 500/- but I cannot make cash payment before six months. Either the seller would wait and sell me his goods at a credit for six months. But supposing the seller is also in immediate need of money, I would adopt another course. The seller would draw a bill of Exchange on me to be paid after six months which I would accept and return to the seller. He would discount the bill with a bank which would not be difficult if we have a financial reputation in the business world. The seller would get the money from the bank and as six months are over the bank would take money from me. Thus production and trade are much facilitated by credit. There is another way also by which credit helps production. It is through helping the idle resources scattered throughout the community to be put in the hands of those who can make use of them productively. Joint stock companies are patent examples of this nature where shareholders entrust their money to the managers for trade and production. Thus credit, though it cannot be called capital, does help in converting idle resources into capital. These are the main advantages of credit. Let us look to the disadvantages now.

The greatest disadvantage of credit is that in the absence of proper control and regulation it may be over-issued and thus spread an unjustified optimism in the economic world which ultimately leads to depression and pessimism. In times of easy and uncontrolled credit many men who are not really deserving and capable may get credit and then fail to properly use it. Such an expansion of credit in its turn becomes a cause of inflation and rise in prices whose disadvantages we have already noticed. Thus to sum up the central defect of credit is that it may over-do its job and thus help the whole economic system to function on an unsound basis for some time and this ultimately leads to a break down and all the accompanying evils.

Just as excess of credit provides an unsound basis for economic expansion in general, similarly it can enable individual businessmen and industrialists to go on with their business and industry even when not run on sound lines for some time at least with the help of credit. But ultimately the reality must come to the surface and there would take place a collapse. Failure of one businessman would ultimately spell disaster for another and thus the circle may go on widening. This, therefore, is another risk of credit. Credit also encourages waste sometimes.

To conclude then we can say that credit has many

disadvantages which can be avoided by strict control and regulation.

Banks.

So far we have discussed credit and its importance in modern economy. Let us now discuss banks and their different kinds as well as their functions. The close relationship between credit and banks would be clear when we discuss what functions the latter perform.

Definition and functions of a bank —There are various definitions of a modern bank given by different writers. It is useless to enumerate any of them. All that we have to remember is that Bank is a person or an institution whose business is to deal in credit. The banker is the main creator of credit in modern money markets. To understand more clearly as to what a modern bank is the best thing is to know the functions it performs. The main functions of a modern commercial bank are three :—

(1) **To receive deposits.**—This is the first important function that a modern bank does. Deposits are received in cash as well as in cheques, the latter being credited to the account of the person making the deposit when it has been encashed. A bank has three different accounts in which money may be deposited. *Current Account* is one. This account is meant mostly for businessmen who have to deposit and withdraw money very often, because there exist no restrictions on either the number of deposits or withdrawals that can be made during a week. Withdrawals are made by cheques. Good banks do not allow any interest on deposits made in the current account. Another account is the *Fixed Deposit Account* in which deposit is made for a fixed period before the expiry of which money could not be withdrawn. Rate of interest is allowed on deposits and it varies with the time for which deposit is made. The third account is the *Savings Bank account* which is meant for encouraging middle class persons to save. A moderate rate of interest is given and withdrawals are possible only once a week. Banks not only receive deposits but also create deposits. The difference between the two must be appreciated. When deposits are received banks usually receive cash or cheques and the depositors get the right to withdraw the money as they like and as rules permit. But when deposits are created banks do not receive anything from the customer who, however, gets a right against the bank

to withdraw a certain amount of money for which bank has credit to the person concerned. This happens when a bank agrees to give loans to any person. When a loan is created by a bank the amount is not paid there and then in

cash. All that it means is this that the person concerned has a right to draw cheques upon the bank up to that amount. Hence by granting loans, we say that deposits are created, because deposit means only a right that a person has against a bank to withdraw money by cheques.

(2) **Giving of loans.**—We have seen how the first function leads to this second important function of a bank. It is for this purpose that the money which a bank actually receives in the form of deposits is utilised. Loans are granted both for productive as well as unproductive purposes. Commercial banks grant loans only for short periods. A rate of interest, which is higher than the rate paid on deposits, is received by the bank concerned. Security is also demanded, though loans are granted on the basis of the personal security of the borrower also. Commercial banks grant loans to business men generally, though short period loans to agriculture as well as industry are also made.

In fixing up the maximum limit to which a bank may safely grant loans, it has to follow a certain policy about cash reserve. By cash reserve is meant the actual hard cash which is present in the bank's coffer to meet the claims of those who go to the bank for withdrawing money. Experience has told the bank that out of a total amount of outstanding claims against it, more than a particular percentage, say 20 or 30, would never be pressed for actual payment. Taking advantage of this experience, a bank always allows more claims to be created against it than the actual cash it possesses. Suppose a bank has in its possession actual cash to the extent of Rs. 10,000 and by experience it knows that it should keep 35% as cash reserve. Then on the basis of Rs. 10,000 in actual cash, the bank can create against itself claims to the extent of Rs. 40,000. It is not necessary that the percentage of cash reserve fixed at one time may never be varied. It would change according to conditions of trade and other things such as the confidence of the people in the country's banking system.

(3) **Discounting of bills of exchange.**—This is the third important function of a modern commercial bank. It is closely related to the second, because discounting a bill of exchange also means granting credit facilities to the person who discounted the bill. Suppose I have a bill of exchange for Rs. 500 to be paid after three months by the drawee. I, however, want money immediately. I can go to a bank and discount the bill with it provided the bank has so much confidence in me, the drawer, or the drawee. It would mean this that I would get immediately Rs. 500 minus something which the bank charges as discount. It is not necessary that I may take

the money in actual cash. I may only get a right against the bank for withdrawing so much money which I may do at my convenience.

Besides the three important functions that a modern bank performs, there are some others also of a miscellaneous nature or of the nature of agency functions. So far as miscellaneous functions are concerned the following may be mentioned:—

(1) Safe custody of valuables—All modern banks perform this service to the public of keeping their ornaments, important documents and other valuables in safe custody. For this they make a moderate charge also.

(2) Purchase and sale of foreign exchange.—Businessmen or private persons have to remit money to or receive money from foreign countries. For this purpose money of one country is to be converted into that of another at the prevailing rate of exchange. Banks perform this function also. If I have to send money to England, I can make payment to a bank here in India in rupees and the bank in return would arrange for payment in England to the person for whom I ask the bank to pay. In India we have special banks for the purpose, known as the Foreign Exchange banks.

(3) Issue of credit instruments—Banks also create credit instruments such as bank-draft, letters of credit, and cheques.

The agency functions that banks perform are also varied. For example, they collect and pay cheques on behalf of their customers, receive dividends for them, pay subscriptions according to their instructions, purchase and sell shares for them and also render them necessary advice in these matters and lastly they act as trustees, attorneys and executors also.

From what we have discussed above, it is more than clear that banks perform many valuable services to society and are the very heart of a country's credit mechanism.

Kinds of banks.—The banking system of a modern nation is composed of banks belonging to different classes. We have discussed the functions of a modern commercial bank somewhat in detail in the above pages. A little acquaintance with the nature of work other banks do is also, however, desirable. First, in every modern nation, banks can be divided vertically into two categories, the Central Bank and other banks. Then, these other banks may also be classified according to their respective functions.

The Central bank.—It is the chief bank of the country which is responsible for regulating the whole credit system on a sound and efficient basis. In relation to other banks its position is that of a friend, guide, and philosopher and not

that of a competitor. The Central Bank performs three important functions. First, it is a bankers' bank and as such all banks of the country keep their surplus balances with it and in times of need approach it for help. Through its bank rate it controls the activities of all banks of the country. To make its policy effective sometimes it has to enter into competition with other banks also and carry on what are known as open market operations. Secondly, every central bank performs the function of a Government bank also. As a Government bank it is the custodian of Government money, receives and makes payment on its behalf and also floats and manages Government loans. Lastly, a central bank is also vested with the sole power of note-issue in the country and thus it is also the country's currency authority. This function is given to the central bank so that credit and currency may be under one institution's control and there may be no difficulty in their coordination.

Commercial Banks.—They are the banks whose functions we have discussed at some length. They deal in short-term credit only.

Exchange Banks.—These banks are engaged in financing the foreign trade of a country and specially deal in foreign exchanges.

Industrial Banks—These banks as their very name suggests are meant to finance industries with long term capital.

Agricultural Banks.—They provide long-term capital to agriculture.

Co-operative Banks.—They finance the short term need of agriculturists generally.

Co-operative land mortgage Banks.—They are also agricultural banks run on co-operative lines and carrying on the function of providing long term loans to agriculturists against the mortgage of land.

A Bank Balance Sheet.—We have in brief discussed the different kinds of banks. We shall now explain the various items that occur in the balance sheet of a commercial bank. The following is a specimen Balance Sheet.

Balance Sheet as on.....

Liabilities	Amount	Assets	Amount
Paid up Capital	Cash in hand ...	...
Reserve Fund	Cash at Bank ...	...
Deposits	Money at call and short notice ...	...
		Bills discounted...	...
Acceptances for account of customers...	...	Investments ...	...
		Advances ...	...
		Bills Receivable as per contra 'acceptances for which customers are liable) ...	...
		Bank premises and dead stock ...	...
Total ...	_____	Total ...	_____

We shall now explain the different items of the B/S. Balance Sheet shows the financial position of a business at a particular date. It has two sides. On the left hand side is the list of liabilities and on the right hand side is the list of assets. Liabilities mean the claims that others have against the firm. Assets show the firm's property.

On the liabilities side in the above B/S, the first item is of 'Paid up Capital'. It shows the sum of money that the shareholders have actually paid on their shares. Suppose the share-capital of a bank consists of 10,000 shares of Rs. 100 each out of which the shareholders have so far paid only Rs. 50/- per share. Then the paid-up capital of the bank would be Rs 5,00,000/- only. Reserve-Fund shows the amount which has been accumulated out of the Bank's profits which were not distributed to the shareholders. Every year out of the net profits of the bank, a certain percentage is credited to the Reserve Fund. A strong reserve fund means good financial position of the bank. Deposits show the claims which the customers can make against the bank. They refer to current account as well as fixed deposit account and Savings Bank account deposits. The last item is about acceptances on account of

customers. This is an item of contingent liability which may occur or may not occur. If the customers on whom the bills in question are drawn would make the payment, the bank would not have been any liability to face. In case, however, the customers fail the bank will have to pay on their behalf. Because the liability is contingent, it is balanced by another item of the same amount on the assets side also under the heading 'Bills Receivable as per contra.' If the bank would make payment on account of these bills, in turn it would have claims for equal amounts against the customers concerned and hence the item on the assets side.

Coming to other items on the assets side, we know that 'cash in hand' represents hard cash in the bank's coffer ; 'cash at bank' shows bank's deposits with the Central Bank ; 'Money at call and short notice' represents the amount which the bank has loaned to stock and share dealers for a very short period of a day or so and which is usually repayable on demand ; Bills discounted means the bills of exchange discounted by a banker whose amount he would receive in due time ; 'Investments' shows the money which a banker has invested in shares etc. ; 'Advances' show the largest amount in a commercial bank's B/S representing the loans the bank has granted and lastly 'Bank Premises and dead stock' refers to buildings and other similar assets. The capital invested in them is permanently locked up and as dead stock.

PART V.

CHAPTER XXIII.

DISTRIBUTION.

The total wealth of a country is jointly produced by four factors : Land, Labour, Capital, and Enterprise. The wealth thus produced by joint effort of these factors, called the national dividend is divided among the four factors. But How? This is the problem of distribution.

If all the factors of production are owned and possessed by one single individual then in practice the problem of distribution loses all significance. For example if a potter himself brings the earth owns the potter's wheel, works single handed and does the marketing of earthen pots unaided by any other person then whatever price he gets for pots goes to his pocket. He need not share that amount with any other person since he was not at all helped by any other person in production. But if we take the case of a cultivator who has taken land on hire from a land-lord, has borrowed money from a Mahajan for purchasing seed, manure, implements, and bullocks i.e., capital, and has engaged labourers to help him in cultivation, and he himself besides working on the land has organised cultivation and has taken the risk, then he alone cannot pocket the total produce of the land. He has to share it with the owners of other factors of production.

In most cases of wealth production these days the wealth produced is the result of the joint efforts of the factors of production owned by different people and hence the problem of Distribution has assumed such importance.

The above illustrations clearly explain what we understand by the term Distribution of wealth. Just as in Economics we do not study the activities of an individual in isolation in the same way in Distribution we do not study what share an individual will get in the produced wealth. Therefore it must always be kept in mind that economics of distribution does not discuss the problem of ' personal ' distribution i.e., how the income of each individual is determined. But it deals with functional-distribution that is how the share of each factor is determined.

In every country annually the labour, capital, organisation and enterprise produce out of its hand (i.e., natural resources) a certain quantity of wealth and that wealth is to be distributed among those factors of production. The share which the owners of land receive is known as Rent, the share of labour is called Wages, capital receives its share in the form of Interest, and organisation and Enterprise is paid in the form of profit.

The theory of distribution is very interesting as well as complicated. It is interesting because it, explains the why and the how much of the earning of every one of us. It is complicated because it has to provide the solution of many conflicting claims of the different factors. Every factor feels that it performs the most important function in production and therefore it must get a much larger share. This provides a battle ground for the respective factors of production.

The theory of distribution is concerned with two main questions. What is to be distributed? And how is it to be distributed? The first deals with the nature and the amount of national income, or national dividend. The second question is concerned with the theory of marginal productivity which is the central theory of distribution.

What is to be distributed.—The amount of wealth that is distributed during a given period among the factors of production consists of the aggregate value of all the goods produced and the services consumed during that period of time minus the wear and tear, and depreciation of capital goods of the country. This is the national income or national dividend which is available for distribution among the factors of production. If the country in question has foreign investments then the income from such investments should be added in order to find out the total national dividend of the country. This amount of national income or national dividend is available for distribution among the factors of production.

How is it distributed.—After we have ascertained the total amount of wealth *i.e.*, the national which is available for distribution among the factors of production, we are faced with the question how the share of each factor of production is to be determined. This is one of the most complicated and controversial topics in Economics and there is much difference of opinion among the writers on this point.

Most widely accepted and prevailing opinion is that the share of each factor is determined by the application of the principles of theory of value. Just as the value of a commodity tends to equal its marginal utility, so the value or remuneration of each factor of production tends to equal its marginal productivity to the employers. The theory of marginal productivity therefore is the central doctrine of distribution. In fact it is the marginal productivity of the factor of production which determines its remuneration.

Just as the marginal utility of a commodity to any individual is the utility of that unit which he is just induced to purchase at the prevailing price, so the marginal productivity of a factor of production is the productivity of that unit of the factor which the employer finds it just worth employing at its current price *i.e.*, remuneration.

As the marginal productivity determines the remuneration of each factor of production it is necessary to find out how the marginal productivity of a factor of production is determined. The marginal productivity is measured by the amount of additional product which accrues to the entrepreneur when he employs an additional unit of that factor, while the supply of all other factors is kept constant. The marginal productivity of any factor can be ascertained by adding or taking away one unit from the total supply of that factor while keeping the supply of other factors constant.

To illustrate the concept of marginal productivity further, let us take an example of a farmer who has 100 acres of land to cultivate, has capital worth Rs. 500, engages 5 labourers besides him and he himself works on the land, organises the cultivation and undertakes the risk. Thus in other terms we can say that the following is the combination of factors of production—Land 100 acres, capital Rs 500, labourers—5. With these factors he produces 600 mds of wheat. Now this farmer adds one more labourer and keeps the other factors constant. It means that there is no change in other factors but the number of labourers has been increased to six, and this time the total production is 650 mds. This increase of 50 mds. in the total produce is directly due to the new labourer added and therefore the farmer will not pay him more than 50 mds. or its cash worth as wages. Again let us imagine that the supply of labourers being more in the country and therefore instead of adding more capital or land every farmer in the country adds more labourers to his farm, our imaginary farmer also employs one more labourer. So that the number of labourers increases to seven and all other factors remain constant. This time the total production is 600 mds. only. It is assumed that the seventh man is as efficient as the sixth or the first or second but he has added only 30 mds. to the resultant produce instead of 50 mds added by the sixth. This decline in the additional produce is not due to the inefficiency of the seventh labourer but it is due to the operation of the 'Law of Diminishing Returns.' We have assumed that all the seven labourers are alike in efficiency and therefore every labourer is equally efficient. Hence 30 mds. is the marginal net produce. The farmer will not offer more than 30 mds. or its cash worth to any labourer because the seventh is as efficient as the first or second. Thus every labour being equally efficient nobody will get more than what the seventh has added to the resultant produce because 30 mds. is the marginal net product and that will determine the maximum which the farmer will pay to every labourer.

Before the seventh labourer was employed, the marginal productivity was 50 mds. and that was the wage of every labourer and before the sixth labourer was employed the marginal productivity was still higher, say, 75 mds. and that was the wage of each labourer. It follows therefore that as the supply of labourers increases the marginal productivity of labourers decreases and with the falling supply marginal productivity increases. In this connection one thing should always be kept in mind, that the illustration of our imaginary farmer represents the prevailing situation in the society. That is, the supply of labourers in the country is great and therefore labourers are cheap and consequently every farmer engages more labourers on his farm, the marginal productivity of labourers thereby diminishes owing to the operation of the 'law of diminishing returns,' and everywhere the wages of labourers decline.

Thus the marginal productivity of labourers determines their wages and the marginal productivity in turn depends upon the supply of labourers. If the supply increases the marginal productivity falls and if the supply falls the marginal productivity increases.

The same is true of other factors of production. If we keep other factors of production constant and increase the unit of capital, the marginal net product of capital can be found out and thus we can determine the share of wealth which will go to capital. By finding out the marginal productivity of every factor of production we can find out its share in distribution.

In fact it is supply as well as demand, i.e., the marginal productivity of any factor which determines in the very long run the share of each factor in the produced wealth. But at a given time the supply of a factor is fixed. Given the supply, marginal productivity of a factor determines its rate of payment.

While studying the 'theory of value' we have noted that the supply, i.e., the cost of production and the demand, i.e., the marginal utility determines the value of a certain commodity. Exactly in the same manner the supply and the demand, i.e., the marginal productivity of a particular factor determines its remuneration. But as for a given time the supply of the factors is fixed the remuneration is determined by their marginal productivity. But in the long run the supply factor does play its part in determining the share in the produced wealth. So the theory is not a new one but it is the familiar theory of value which we have already studied in previous chapters.

CHAPTER XXIV.

RENT.

Rent is that portion of the produce of the earth which is paid to the landlord for the use of the original and indestructible powers of the soil. It is often however confused with the interest and profit of capital and in popular language, the term is applied to whatever is annually paid by a farmer to his landlord. If of two adjoining farms of the same extent and of the same fertility one had all the conveniences of farm buildings, well, fencing wall all round, and besides was properly drained and manured, and the other had no such advantages, more remuneration would naturally be paid for the use of one than for the use of the other, yet in both cases this remuneration will be called rent. But it is evident that only a portion of the money annually to be paid for the improved farm would be given for original and indestructible powers of the soil, the other portion would be paid for the use of capital which had been employed in improving the land by putting manure, sinking a well, constructing farm buildings, and erecting a hedge all round.

Therefore we can say that Rent of land is a payment for the services of land. It often includes interest on capital invested in or on the land in the form of fertilisers, fencing, wall, well, and farm buildings. But by "Economic Rent" we only mean that payment which is made for the use of land alone (i.e., for the original and indestructible powers of the soil) apart from any capital invested in it or on it. The readers should always bear in mind this distinction between the popular meaning of Rent and Economic Rent.

In ordinary language Rent signifies a sum paid by one person to another for the loan, a lease of any durable thing, such as a tract of a land, a house, a piano or any machine. But this is not the sense in which the word is used in Economics. In its usual sense, it means the payment made by the tenant to the landlord for the use of a farm. But it does not make any distinction between the income from the use of land and the return from the investment of capital in land. Only the former should be called rent, and the latter is interest. Economic rent, therefore, is the payment for the services of land in production. It is in the words of Ricardo, a payment for the use of the original and indestructible powers of the soil.

How Economic Rent arises.—All lands are not alike they differ in 'fertility' and 'situation value'. The fertility of land depends on its physical composition and it is common experience

that certain pieces of land are more fertile than others. It can be agreed that the land newly brought under cultivation at present has its original form and composition. The constant investment of capital and labour on the land for decades and centuries changes it beyond recognition. There is no doubt that much of the surface soil is the creation of man's efforts. For decades and in old countries for centuries man has been working hard on the land to improve it. He has been constantly manuring, ploughing, taking out the stones and pebbles, irrigating and doing all other odd jobs to improve the land and therefore for all practical purposes the surface soil of the land which is the most valuable factor in agriculture is a creation of man.

But all the same it will have to be admitted that given two pieces of land of the same size but of different original productivity the one which is originally superior will produce more than the other even though the labour and capital invested on both the pieces of lands is exactly the same. This proves that there are certain original and indestructible powers of the soil which differ in the case of different pieces of lands. This original difference in the productive power of soil depends upon its physical composition and it has nothing to do with the efforts of man on the land. Therefore when we talk of difference in the fertility of land we mean thereby the difference in the original and indestructible powers of the soil. It has been proved therefore that the first characteristic of the land is that "it differs in fertility".

The second characteristic of the land is that "it differs in situation value". Every land is not equally well situated. Take for example two pieces of land equal in size and having the same fertility—one situated near a railway station and the other situated away from rail or road in an interior village where transport facilities are absent and there are Kachcha roads and unbridged rivers in the way. Let us again imagine that cotton is produced on both the pieces of land. Though the cost of cultivation will be the same in both the cases because they are equally fertile, the cost of transportation will be much higher in the case of land which is situated away from the railway station in an interior village. Therefore the better situated land will be more productive than the other land which is situated away from the railway station in the interior. In short, we can say that land differs in fertility and situation value and when we say that a particular piece of land is superior to the other, it means that land is superior both in respect of fertility and situation value. Keeping in mind these characteristics of land let us proceed further and study how the rent arises.

Let us imagine that a new island is found out in the Indian Ocean and it is totally devoid of human population. India being thickly populated a batch of settlers goes to this newly found depopulated island and begins to cultivate the land there. It is natural that every new settler will occupy the best land available both from the point of view of fertility and situation value and cultivate it. As long as there is a plentiful supply of best land, available in the island nobody would pay anything for land, because everybody is free to occupy the land which still remains uncultivated. The produce that is raised on the best land is sufficient to meet the demand of these settlers. Under these circumstances nobody will pay any rent for land in that island because land is unlimited.

Hearing about the comfortable life which the first batch of settlers are enjoying and of the land being freely available in the island, the friends of the first settlers also migrate in the form of second batch to the new island. The remaining best land would soon be occupied and cultivated. But the total produce raised on all the best land is not sufficient to satisfy the increased demand for food. Under the circumstances new settlers must begin to cultivate the next best land or second grade land which is still unoccupied in the island. But the second grade land will produce less than the best or first class land. Let us assume that if the first class or best land produces 10 mds. of wheat per acre the second grade land will produce less than 10 mds. i.e., 9 mds. per acre. It should not be forgotten that for the application of the same amount of labour capital and organisation the first class land yields 10 mds. and the second grade land only produces 9 mds. Now the price of wheat must be such that by selling 9 mds. of wheat in the market the expenses of employing that amount of labour and capital (including the normal profits) must be covered, otherwise the second grade land would not be cultivated. Therefore the price of wheat ruling in the market will be high enough to enable 9 mds. of wheat to pay the cost of cultivation on one acre of land. Under the changed conditions the first class land will now pay a surplus of 1 md. of wheat to its owner which he pockets and this is the rent. So when the second grade land is cultivated the first class land yields a surplus of one md. of wheat per acre and thus the rent appears.

The population of this imaginary island will go on increasing as new settlers arrive in the island and population of the island multiplies. As population increases the demand for food in the island also increases and more land will be brought under cultivation. Suppose all the second grade land available in the island has been brought under the plough,

but still the food supply falls short of the demand. Then the third class land will have to be cultivated. Third class land yields less than the second class land though the cost of cultivation is the same. Let us take the yield as 6 mds. per acre. Now the price of wheat must be high enough so that by selling six mds. of wheat the cost of cultivation (including the normal profit) may be got back, otherwise the third class land will not be cultivated. At this price the second class land will yield a surplus of 3 mds. per acre and the first class land will yield a surplus of 4 mds. per acre. That is, the second class land which did not pay any rent will now pay a rent of 3 mds. per acre and the rent on first class land will increase to 4 mds. per acre. As population in the island increases and inferior grades of land are brought under cultivation the price of produce will go high to cover the cost of cultivation on the most inferior land, otherwise it will not be cultivated, and the superior land will yield an increasing surplus in the form of rent.

Suppose the cost of employing one unit of capital, labour and organisation (profit) which is necessary to cultivate one acre of land is Rs. 45. So that when the first class land is cultivated and one unit of labour, capital etc. is invested on it the cost of producing ten mds. of wheat comes to Rs. 45, and let us suppose that price of each maund is Rs. 4-8. So that at first there is no surplus, and the total proceeds are distributed among the labour and capital and a little normal profit. But as population increases demand for food also increases and the price rises from Rs. 4-8 to Rs. 5 per md. It now becomes profitable to cultivate the second grade land with the same amount of labour and capital. The produce per acre this time is only 9 mds. and the price is Rs. 45, the sum which just covers the cost of cultivation. Since there can be only one price in the market for any commodity the produce of the first class land will yield Rs. 50 per acre. The cost of cultivation (including profit of cultivation) being Rs. 45. The first class land will, therefore, yield a rent of Rs. 5, per acre. As the population increases further the price will go still higher and when it reaches to a high level of Rs. 7-8 per maund, then it becomes profitable to cultivate the third class land with the same amount of labour and capital etc., i.e., one unit on one acre. This time the yield per acre is 6 mds. and the price is Rs. 45, the sum which just covers the cost of cultivation. Since the price of wheat in the market will be the same whether it is produced on first class land, second class land, or third class land, the produce of one acre of second class land will sell for Rs. 67-8 and that of the first class land, will sell for Rs. 75. The first class land will therefore yield a rent

of Rs. 30 per acre and the second class land which did not yield any rent before will now yield a rent of Rs. 22-8 per acre. The third class land will just pay the cost of cultivation expenses (including normal profit) and no surplus and hence it will be the no-rent-paying land at the ruling price of Rs. 7-8 per md. As population increases the demand for agricultural produce also increases and the price goes high, then the lands inferior to that of third class land are brought under cultivation. Now at the high price the fourth grade of land just pays the cultivation expenses and therefore it becomes the no-rent paying land. The third class land which was until now the no-rent paying land yields some surplus i.e., rent and the rent on first and second class land goes higher. To make it clear let us suppose that the price of wheat increases from Rs. 7-8 per md. to Rs. 10 per md. and the fourth class land produces 4 mds. and 20 seers per acre. Then the fourth class land just yields the cost of cultivation and no surplus. But a surplus (rent) of Rs. 15 per acre appears on the third class land and the rent on second class goes up to Rs. 45 per acre and that on the first class land to Rs. 55 per acre. So that with the rise in price the existing no-rent paying land becomes the rent paying land and the immediately inferior land becomes the no-rent paying land.

If on the other hand population anyhow declines and therefore the demand for wheat in that island also declines and price of wheat falls, or due to import of cheap wheat in the country from outside the price of wheat falls to Rs. 7-8 per md., the fourth class land will go out of cultivation because it cannot yield the cost of cultivation which is Rs. 45 per acre, the third class which was yielding a rent of Rs. 15 per acre will cease to be a rent paying land, and the rent on first class land will come down to Rs. 30 per acre, and on the second class land rent will come down to Rs. 22-8 per acre.

Economic Rent.—Now we are in a position to define economic rent in the following words "Economic Rent is the differential surplus of superior land's produce over the most inferior land under cultivation, i.e., the no-rent paying land." The no-rent paying land is also known as the 'Marginal Land' in Economics. The cultivator on the marginal land does not get any surplus. The marginal land only yields the cost of cultivation expenses and no surplus.

There are two methods of measuring Economic rent. The first method is to deduct the expenses of production from the cash price of the total produce and the second method is to deduct the produce of the marginal land from the superior land's produce. The difference is the economic rent.

Intensive Cultivation and Rent.—So far we have taken for granted that with the increase in population and increasing demand for food materials inferior grades of lands were brought under cultivation. But with increased demand for food materials and the consequent rise in price, the superior lands will be cultivated more intensively. In the above example if inferior lands are not brought under cultivation and only the first class land is intensively cultivated the economic surplus (*i. e.*, rent) will appear. In the above example we invested land and capital costing Rs. 45 on one acre of the first class land and got 10 mds. as the resultant produce. With the increase in the demand of wheat and the consequent rise in the price of the wheat if we invest a second doze of labour and capital costing the same amount *i. e.*, Rs. 45 on the same land the resultant produce will be 19 mds. and not 20 mds. The reason is very clear the land is constant and the labour and capital has been doubled. The Law of Diminishing Returns has operated in agriculture. It goes without saying that unless the price of wheat goes high to Rs. 5 per md. the farmer will not invest a second doze of labour and capital costing Rs. 45. The yield of produce caused by the second doze of labour and capital is only 9 mds. and therefore the price must be high enough (Rs. 5 per md.) to cover the cost of investing the second doze of labour and capital. Now at this stage the second doze just pays the cost and no surplus. But a surplus of 1 md. or Rs. 5 appears on the first doze which is the economic rent. The second doze is the marginal doze. If the demand of wheat still further increases and consequently the price goes high to Rs. 7-8 per md. a third doze of labour and capital may be invested on the first class land and this time the resultant produce is 25 mds. so that there is an increase of six mds. only due to the third doze. At this price the third doze just pays the cost and the second doze yields a surplus of 3 mds. or Rs. 22-8 and the first doze yields a surplus of 4 mds. or Rs. 30. Thus the rent of first class land at this stage will be Rs. 52-8 per acre.

In fact when the population in a new country increases both the extensive and intensive cultivation is carried on simultaneously. So that in order to supply more food the superior lands are more intensively cultivated and new inferior lands are brought under cultivation. In both the cases the rent goes high.

Marginal Land.—We have noted above that the difference between the produce of the superior land and the marginal land is its economic-rent. Exactly in the same manner in intensive cultivation the total of the difference between the produce of superior dozes and the marginal doze is the

economic rent of the land. This should not mean that marginal land is any fixed land. No, it is not. In the above example if the price of wheat happens to be Rs. 4.8 per maund the first class land yields just that much produce which covers the cost of cultivation expenses. Thus in that case the first class land is the no-rent paying land, that is, the marginal land. If the price goes up to Rs. 5 per maund second class land becomes the marginal land and the first class land yields a surplus, that is, rent. Thus with every rise in the price of agricultural produce the existing marginal land becomes rent paying land, rent on all superior land goes up and the immediately inferior land becomes the marginal land. If price goes down the existing marginal land goes out of cultivation and the immediate superior land becomes the marginal land and the rent on all superior lands comes down. Therefore marginal land is not a fixed class of land. The land which just pays the cost of cultivation including normal profits and no surplus is the marginal. According to the change in price the marginal land also changes.

As has been noted above rent is measured from a no-rent margin. When land is of the same quality but is scarce, and has been cultivated beyond the point of diminishing returns, the no-rent margin is represented by the return to the marginal doze. The return to the marginal doze is first sufficient to remunerate the labour and capital applied; but yields no surplus or economic rent.

It has been said that the marginal land does not pay rent. But it can be argued that we do not come across in practice any agricultural land which is a no-rent paying land. It is not necessary that the marginal land may exist in our village, district, province, or country. It may happen that the land in our village or country may be superior land and the marginal land may lie in some foreign country. For example, the land in India may be superior and the marginal land may lie in Siberia or Australia, because the price of wheat is determined by the supply and demand of the whole world. Therefore the marginal land may lie in any country of the world. Moreover the rent actually paid to the owner of land is economic rent plus the interest on the capital invested on the land. Thus in our own country or village the worst land which pays a little rent is really the marginal land. The rent paid is not the economic rent but it is the interest on the capital invested on that land in order to make it cultivable.

Rent will appear even if the land is of the same quality.— It is sometimes argued that rent arises on account of differences in the yields of different pieces of land. But we have seen

that even if all lands were of the same quality rent would emerge if the land were cultivated beyond the point of diminishing return. To take our familiar example. Suppose all the land in the country is first class land and on each acre of land one doze of labour capital costing Rs. 45 is invested. As population increases and the demand for wheat goes high the price of wheat will go high. There being no more land available for cultivation the same land will be more intensively cultivated by investing a second doze of labour and capital. But the resultant product will be only 9 maunds instead of 10 maunds and a surplus of 1 maund or Rs. 5 will appear on the land. So rent emerges on the land as soon as the law of diminishing returns operates.

Up till now we have taken separate examples of extensive and intensive cultivation and tried to show how economic rent arises in both the cases. But as we all know in practice both the intensive and extensive cultivation is carried on as the population increases. Let us now take a simple case and find out how rent arises when both intensive and extensive cultivation is carried on simultaneously.

Let us suppose that there are three different grades of soil all devoted to the cultivation of wheat, A, B and C. The relations of these different grades of soil to each other may be pictured in the following tables. Each farm is of 25 acres.

Grade A

Expenditure in Rupees	Total Product in maunds	Marginal Pro- duct in maunds.	Marginal cost
100	200 mds.	200	as. 8 per md.
200	400 ,,	200	as. 8 ,,
300	500 ,,	100	Rs. 1 ,,
400	550 ,,	50	Rs. 2 ,,
500	575 ,,	25	Rs. 4 ,,

Grade B

100	100	100	Rs. 1 ,,
200	150	50	Rs. 2 ,,
300	175	25	Rs. 4 ,,

Grade C

100	50	50	Rs. 2 per md.
200	75	25	Rs. 4 per ..

It will be seen that the marginal cost for the first units of output is lowest on Grade A, next lowest on Grade B and highest on Grade C and that the principle of diminishing return applies to the cultivation of each grade of land, though the point at which it begins and the rapidity with which the marginal costs rise is not the same.

Now it is apparent at the first glance that until cultivation has been pressed beyond the point at which diminishing returns appear on A grade land, the other two grades of land will not be cultivated at all, since it will not pay to cultivate them. Until the third unit of labour and capital has been applied on the land of the highest quality and the total output of land has been increased to 500 maunds the price of wheat will not rise above Re. 1 per maund, this being the marginal cost. But the first units of produce on B grade land will cost Re. 1 per maund and on C grade land Rs. 2 per maund. To cultivate them therefore will involve a loss to the cultivator. So that upto the point of second doze of labour and capital on the first grade land there will no economic rent, even on the best land since total cost is equal to total income. If the price rises to Re. 1 per maund it will then be profitable to apply the third doze of labour and capital (expenditure) on A land, and the first doze of labour and capital on B land. Grade C will still remain uncultivated for the market price is still not high enough to cover its initial marginal cost. At this point there will be economic rent on grade A land where cultivation has passed the point of diminishing returns, but none on grade B where total costs are equal to total income. Suppose the market price rises again, this time to Rs. 2 per maund. A fourth doze of labour and capital will now be applied on A land, a second on B land, and the first on C land. Economic rent on A will rise. On B grade land rent will appear for the first time, and while C land though under cultivation will return no producers surplus. If the market price further rises to Rs. 4 per maund, a fifth doze of labour and capital will be applied on A, a third doze of labour and capital on B, and a second doze of labour and capital on C. The economic rent on A and B will increase and for the first time rent will appear on C grade land.

The question may be raised. How can we assume that cultivation will automatically expand with each rise in price

until the marginal units of the produce merely pay back their cost and give no surplus. Why does not the farmer on Grade A or B restrict his output so as to be able to sell all the units of produce at a price in excess of their cost of production. The answer is that he will either not have the power to do this, or if he has the power, it will be unprofitable for him to do it. If he is not the owner of the land, the competition of other would-be tenants will cause the rents to go high to keep place with each increase in producer's surplus. The present tenant can retain possession of the land if he agrees to pay higher rent, after which, if he is to avoid loss, he will have no other alternative than to expand production to the point where marginal produce merely pays back the cost of production and no surplus. On the other hand if he is the land owner, it will be to his advantage to gain the maximum producer's surplus possible under prevailing market price. Hence as the population increases it causes an ever increasing demand for farm produce and a constantly rising price. The agriculture in our imaginary island will be marked by two lines of development. There will be a growing intensity of cultivation on the better grades of land and a wider spread of cultivation to take in soils of poor quantities. Along with these changes will go rising rents on all lands which were formerly rent bearing and a widening of the rent bearing area to include lands which formerly returned no producer's surplus to their cultivators.

Ricardian Theory of Rent is not different from the **Theory of Distribution**.—Rent is the price paid for the services of land and like all prices is to be explained by the theory of demand and supply. Rent depends on the demand for land and the supply of land available in a country. The amount of the produce and the margin of cultivation on the demand side, depend upon the number of population which consumes the produce, and on the supply side, they depend on the extent and the fertility of the available land. Thus the Ricardian theory is not inconsistent with the ordinary theory of value. Only it goes a little further, and attempts to show the process by which rent came to arise.

Rent arises because there is scarcity of land in relation to demand. The only peculiarity is that the scarcity of land is more or less permanent while the scarcity of other things is temporary. This fact introduces certain peculiarities, but does not make the theory of rent in any way different from the general theory of value.

Rent and Price.—Rent according to Ricardo is the result of price, and hence does not determine the price of agricultural produce. Rent is the differential surplus on the superior lands

produce over the marginal or no-rent-paying lands. The marginal lands pay no rent, and since the price of agricultural produce tends to equal the cost of production on the marginal lands it is proved that rent does not determine price. It is not true to say that rent is high and therefore the price of corn is high. The correct statement is, that price of corn is high, therefore rent is high. It is only when the price is high that the inferior lands are brought under cultivation, and the superior lands yield a surplus above the cost of production. One should not forget that cost of production includes normal profit. Therefore a farmer by cultivating the marginal land will get back his remuneration for organisation and enterprise as well.

Let us suppose for arguments sake that the owners of land abolish all rents charged on their lands. This change will have no influence on the price of wheat. Because the price of wheat will be equal to the cost of production expenses on the marginal land and since the marginal land does not pay rent the tenant cultivating the marginal land will not be benefited by the abolition of rent. Hence if the land owners abolish rent on their lands the tenants of the superior lands will pocket the producer surplus or economic surplus and the price of wheat would remain as it was.

This theory has often been misunderstood. For an individual producer the rent that he pays for the land is a part of his expenses of production which he must cover. From the individual point of view it is regarded as a part of the cost of production. But economics is not concerned with the individual point of view. From the society's point of view, taking the land supply as a whole, the payments for land are not a part of the costs that make up the supply price of a thing. The reason is clear and obvious. Land is a free gift of nature and there is no element of real cost in the supply of land, because the supply of land as a whole involves no disutility to overcome which compensation may have to be paid. But the supply of capital and labour involves disutility and hence a payment must be made to overcome this utility. Wages and interest are therefore a part of necessary costs. But the payments on account of the services of land are not a part of the necessary cost of production.

This will be clear, if we imagine what would happen if no wages were paid, or no interest was paid. The result would be that the supply of labour and capital will fall off. Very few people will like to work or lend their capital if no remuneration comes forth. Wages and interest must therefore be paid if the supply of labour and capital is to be kept adequate. But if no rent is paid the supply of land will not go out of

cultivation. In this sense rent is not a part of the supply price of a product.

Exceptions.—But this rule regarding rent and price is true only as far as economic rent is concerned. If due to great scarcity of land the land-owners are successful in charging higher rents than the economic rent and even marginal land is made to pay rent then this scarcity rent will enter into price. Any rent above the economic rent or the rent paid on the marginal land will form part of the price. There is still another case in which rent will enter into price. Suppose Land 'A' was under wheat crop and the rent on this land was paid at the rate of Rs. 2 as. 8 per acre. Later on it is made to produce rice instead of wheat. As Rice land it is the most inferior land, but if on account of great demand of rice 'A' land is brought under rice cultivation even then the owner will have to be paid Rs. 2 as. 8 per acre. Under these circumstances rice can only be cultivated on 'A' land when the price of rice goes high. Therefore in the price of rice, that rent will enter which was paid by the land 'A' when wheat was cultivated on it.

Effect of economic development on rent.—We have already discussed that economic rent is dependent on the price of produce raised on that land. If the price of agricultural produce increases the rents will also increase, and if the price falls the rents will also fall. Therefore those factors which will bring about a rise in price of agricultural produce will also be responsible for the rise in rent, and those factors which will bring down the price will also depress the rents.

Now let us suppose that an improvement is effected in agricultural machinery, or an improved type of manure is invented, or a better seed is evolved by which the production per acre increases very much. Then the net result in any case will be that there will be more produce than before. Supposing that the demand for agricultural produce does not rise, the increased production would bring down the prices. The marginal lands, i.e., the lands which were just paying the cost of cultivation at higher prices would go out of cultivation, and rents on all superior lands will come down.

Now we shall consider the improvement in transportation and its effect on the rent. Improvement in transportation and communication can bring about either a rise in price or a fall in prices. If the country in question is very thickly populated and the land being scarce rents are very high, improvement in transportation will enable the country to import agricultural produce from thinly populated countries. Thus in the thickly populated country prices will go down and hence rents will also go down. But in the thinly populated countries prices will

go up and consequently rent will also go high, because this country will export her agricultural produce to the thickly populated country. Price of agricultural produce in the thinly populated country will go up and therefore the rents will also go up. This tendency was noticed in England when U. S. A. and Canadian wheat began to reach England. Rents in England went down as the price of wheat etc went down in England. Improvement in the means of transportation raise the rents in newly opened up areas while the inferior lands in the old countries go out of cultivation. Therefore the rents fall in old countries and rise in new ones.

Rents also vary with the growth in the number of population. An increase in population creates a greater demand for agricultural produce. This extra demand is met either by intensive cultivation on the better grade lands, or by cultivating new inferior lands. In both the cases the margin is lowered and the rents will go high.

As the incomes and the standard of living of the people rise the proportion of their incomes spent on the staple articles of food diminishes. The proportion of income spent on food stuffs thus continually diminishes as the standard of living improves. Hence with the progress in the standards of living, the price of agricultural produce falls relatively to those of other industries or does not rise as much as in other industries. The rents therefore fail to rise as rapidly as the incomes from other industries go up.

Contract Rent.—We have discussed above that economic surplus determines the economic rent. But in practice it is not necessary that the tenant must pay the same to his landlord. The rent which the tenant agrees to pay to the land owner is known as 'contract-rent'. Thus the contract-rent is that rent which is agreed upon between the land-owner and the tenant. Therefore, the contract rent may be a little more or less than the economic rent. If there is a great scarcity of cultivable land in the country and there are no other occupations for the cultivators to fall back upon the land owners if left free can charge a higher rent than the economic rent. In case rent is fixed by custom or the land owners on their own accord charge less than the economic rent the contract rent may be less than the economic rent.

In most cases the rent which the tenant pays to the landlord for agricultural land is fixed by the state. Thus the rent fixed by state may be more or less than the economic rent.

Gross Rent and Economic Rent—The rent that is usually paid by a tenant, i.e., Gross Rent, includes (a) a payment for the use of land as such i.e., Economic rent, (b) a return on the capital invested, (c) a payment for the services of the land-

lord or his agents wages. It might also include some payment on account of the risks which the land owner might have borne in developing the land.

Economic Rent on Urban Lands.—Let us consider economic rent in the urban centres, where we shall find the same principles in operation as in agriculture. But in the case of cities the differences in fertility are of no importance. The rent in cities depends upon the advantageous situation of the site. Let us take a concrete case. Suppose A has two plots of land—one in the heart of the city where business is very brisk and the other on the outskirts of the city nearly 5 miles from the city. Both the plots are of equal size. A constructs shops on both the plots, the size and design of the shop is the same and the quality of material is the same. Therefore the cost of erecting the shops will be the same. Say, it is Rs. 5,000. Now the rent which he receives for the shop in the heart of the city is Rs. 150 per month and the shop at the outskirts fetches only Rs. 15 per month. This difference in rent is due to the economic rent of the superior site.

Rent for houses built for residential purposes and shops and business offices etc. absolutely depends upon situational advantage. There are sites very well situated and others which are badly situated the rent of better situated plots will be higher and that of badly situated plots very low. That part of the city which is the centre of business or where there are wide roads, good sanitation, parks, and other facilities available are bound to fetch higher rent. But plots which are far away from the centre of business and other amenities of civic life are bound to fetch a very low rent. Away from these inferior sites and a little away from the boundaries of the city you have land which is the marginal land as far as its utility for building purpose is concerned. Therefore the economic rent of superior plots will be measured from that of the marginal land. Marginal land does not pay economic rent. It will be clear if we go back to our previous example of shops. If we suppose that the distant plot is the marginal land then Rs. 180 which the owner of the shop receives as rent only cover the interest on the capital invested, repairs, and the cost of service and management. The superior land pays a huge economic surplus and that will be the economic rent of the superior plot. As the population of the city increases and the city expands the demand for building sites increases. Under changed conditions the marginal land which was on the boundaries of the city may become superior land and the boundaries of the city may extend much further. Land situated away will now become the marginal land and the rent on the superior

lands will increase. It is a very common experience that as city expands the rental values go high in the city.

Just as in agriculture the superior urban sites are more intensively used for building purposes. More storeys are put on the superior plots as demand for building sites increases. But the law of diminishing returns operates here as well. After the addition of a few storeys the marginal story is reached where the annual cost of management, maintenance and upkeep is equal to its rental value. The lower storeys obtain higher rents because the customers can easily step in and purchase the articles of the shop. Thus the shops in the lower storeys attract more business and therefore pay higher rent. The difference between the lower storeys and marginal storey is the economic rent of that plot.

Rent of mines and Quarries.—The working of mines and quarries differs from the cultivation of agricultural land inasmuch as mines and quarries are sooner or later exhausted, while the agricultural land is a permanent source of income. Once the mineral has been taken out of the mines the mine is no more productive of mineral. But agricultural land is capable of raising crops indefinitely therefore the payment made by the lease-holders of mines and quarries includes payment for rent as well as for royalty is paid at a fixed rate per ton of mineral taken out of the mine since the mine will be exhausted after some time. So royalty is a payment for the exhaustion of mines contents. Rent is the payment for the differential advantage of superior mine over the marginal mine. There are certain mines which are the marginal mines and which just pay the cost of mining and no surplus. If any how the price of that mineral increases inferior mines are worked and the marginal mines become superior mines, so that the margin shifts to inferior mines. It is a common experience in the coal mines of India that when the price of coal is high certain neglected coal pits are worked and when the price of coal goes down they are given up. The rent is therefore measured from the marginal mine. Now let us see what factors determine the superiority and inferiority of a mine. The first thing is the depth at which the mineral deposit is found and the second is the mineral content in the ore. There are iron mines in which iron content in iron ore may be as low as 20 and 25 per cent., and there are superior mines in which even 70 per cent. pure iron may be available in the iron. Thirdly the situation and the relief of mine also determine the superiority or inferiority of a mine. If the deposits are found near at hand, the percentage of pure mineral in the ore is large, and situation is good, the cost of mining one ton of mineral will be much lower than in the mine which is

very deep, the percentage of pure mineral is less and it is badly situated.

We find both extensive and intensive margins in the making of mines too. The extensive margin is obtained by comparing different mines and the intensive margin is obtained from working the same mine more intensively, by investing more labour and capital in it. As price of mineral increases new inferior mines will be opened up as well as more doses of labour and capital will be invested in the superior mines.

Economic Rent of Fisheries.—Fisheries also have an income in the nature of rent, the rent being measured upwards from those fisheries which are considered as marginal either because of their low productivity or because of their inaccessibility. There are certain fisheries which are very rich and are very near the sea shore. They are regarded superior fisheries and those which are poor and far away in the ocean are regarded as marginal ones, because the cost of catching one ton of fishes is much higher in the case of marginal fisheries and much lower in the case of superior fisheries.

Rent of ability.—The law of rent is also applicable in the case of human beings. If we care to calculate the income of different persons working in the same occupation or profession we will find that their incomes widely differ. The reason is that some persons have inborn qualities and therefore they prosper in their profession, while there are certain persons who are the marginal ones in their occupation. Talented persons get more income than marginal ones and this difference in income is their rent of ability.

Quasi Rent.—The conception of Quasi Rent was introduced into Economics by Marshall. By quasi rent he meant "the income derived from machines and other appliances for production by man."

Unearned increment of Land.—While discussing Ricardo's theory of rent we have stated that the scarcity of land is responsible for the appearance of rent. As population increases, and industries and trade develop, and transport facilities are made available the demand for land increases, and the rent and the value of land goes high. This rise in land values is due to increased demand for land and scarcity of land. It is not caused by any capital investment or effort on the part of the owner of land. It is due to social and economic causes that the value of land goes high. This increase in the value of land is known as 'unearned increment of land'. Let us suppose that there is some uncultivable land

of a Zamindar at some distance from a city. Land is unfit for cultivation purposes and being away from the city is unfit for building purposes too. Therefore the price of that land will be very little, say, 4 as. per sq. yard. After some years due to the establishment of a large number of factories, transfer of Government offices, development of trade and commerce the population of that city grows enormously so that the city expands and that uncultivable land of the Zamindar becomes a part of the city. Now the land will be utilised for building purposes. The price of the land goes up and the Zamindar sells it off at the rate of Rs. 4 per square yard. The land which could not attract buyers at 4 as. per sq. yard is sold at the rate of Rs. 4 per yard. Without investing any capital or labour on the land the Zamindar gets this increment in the price of land. This is known as unearned increment of land

CHAPTER XXV.

WAGES.

In modern society the other owners of factors of production i.e., Land-owners, capitalists, and entrepreneurs are in an insignificant minority, the vast majority of mankind derive their income from their own exertion, that is, from labour. The term labour as generally used in Economics has a broader meaning. It includes the exertions of the members of these three groups : (1) those who sell their labour, whether manual or mental to employers in return for wages or salaries, to which class the term labour in a narrower sense is sometimes confined. (2) independent professional men and women such as lawyers, physicians, artists etc., who render services to their clients for fees and professional earnings, and (3) businessmen, enterprisers, who own and direct industrial enterprise and receive in addition to interest and profits, reward (wages) for their active managerial services.

In ordinary language it is customary to distinguish wages, salaries, fees, and other professional earnings. But in economics they are treated as wages. Therefore wages can be defined as "remuneration received from other persons in exchange for labour."

Theory of Wages.—Since wages result from the sale of labour the rate of wages is governed by the forces of demand and supply. But the study of these controlling forces, that is, the demand and supply of labour present peculiar difficulties which make an explanation of the wage rate one of the difficult problems of economics. Therefore before we study the theory of wages it is necessary for us to find out the peculiarities of the labour commodity or the supply of labour, and the demand of labour.

Peculiarities of Labour

1. 'Labourer must accompany his labour'.—The first peculiarity is that labourer and his commodity, that is, labour cannot be separated from each other. Therefore the labourer himself has to go and work at a place where his employer wants him to deliver his labour commodity. There lies the difference between the labour commodity and all other commodities. When a farmer sells his cotton in the market he is not at all concerned about the future of cotton. Whether his cotton will be turned into fine fabrics or it will be burnt into a furnace does not concern him. He is not interested in the matter at all, what he wants is the price of his cotton. Therefore the farmer will sell his cotton to the highest bidder irrespective of the use he will make of his cotton. But when the labourer wants to 'sell his labour he

cannot be unmindful about all these points. Before accepting a job the labourer will find out the nature of work he will have to perform, the hours of work, the conditions in which he will have to work and the treatment of the master, because when he sells his labour he has to go personally to the master's place and deliver his labour by constantly working for a certain period of time under the conditions offered by the employer. For example, if labourers are recruited for working mines they will have to go under ground and work inside the mine. The labourer is a human being who has his own whims, fancies, likings and dislikes and sentiments and therefore he cannot go to work everywhere. This peculiarity of the labour factor makes the labour comparatively immobile.

2. Labour is highly perishable.—The second peculiarity of labour factor is that it is highly perishable. It is the most perishable commodity indeed. If a labourer remains unemployed even for one hour, that hour is lost for ever, because that hour which has been lost cannot be added to his life time. Nor will the labourer ever be in a position to earn wages for this hour which has been lost.

As labour is the most perishable commodity and as most of the labourers are very poor and possess no funds to maintain themselves during unemployment period they are compelled by circumstances to sell their labour immediately at whatever price they can get for it. Otherwise, they have to starve. In other words labourers are at a great disadvantage in bargaining with the capitalists. The labourers mostly have to accept whatever wages the employers offer, because labourers cannot hold out for long. The seller of a durable commodity like wheat or cloth may hold it back when he does not get a fair price for his commodity but the labourer cannot do so on many occasions. The highly perishable nature of labour commodity reduces the bargaining capacity of the labourers to a very low level and enables the employers to exploit the labourers by paying them low wages.

3. The third peculiarity of the labour commodity is that labourers cannot bargain and higgle about their wages with their employers on equal footing because they are very weak in bargaining capacity. Firstly, labour being a most perishable commodity, labourers having no savings to depend upon during the days of unemployment are compelled to accept whatever wages the employers offer. Because labourers cannot wait, therefore they cannot succeed in bargaining with the employers.

1, the employer does not stand in such great need of an dual labourer as a labourer stands in need of a job. For le, if a single labourer feels that he is getting very low

wage, the only alternative for him is to leave the job and thereby be unemployed. Let us assume that he was working in a factory which gave employment to ten thousand labourers. In such a case if one single or even ten or twenty labourers leave their work the factory will not stop and the owner of the factory will not be put to any monetary loss. The work which was being done by the ten labourers will be carried on by the remaining labourers. But those labourers will lose their jobs, and will become unemployed. Therefore the labourer has to keep quiet and accept the wage which is paid to him. The employer in this case is ten thousand times stronger than a single labourer in bargaining capacity, and therefore he can easily out-bargain the single labourer. Of course, if all the ten thousand labourers of the factory organise themselves into a trade union and the trade union bargains on behalf of all the labourers, in that case this weakness of labourers can be removed to some extent. In short, we can say that the seller of a commodity by waiting for some time can sell his commodity at a higher price but the labourer cannot afford to wait and therefore has to sell his labour commodity at any price which the employer offers.

4. The fourth peculiarity of the labour factor is that its supply is slow in adjusting itself to the demand. In the case of other commodities the supply of those commodities readily adjusts itself to the demand. For example, if the price of sugar goes high the supply of sugar will increase. But if the demand for carpenters or blacksmiths increases their supply cannot readily increase, because these arts can only be learnt after long training. Even in the case of unskilled labourers the supply is slow in adjusting itself to the demand. As has been said before labour is the most immobile factor and therefore the change in the supply of labour is slowly affected. This is why when factories are established for the first time in a locality, the wages in that place go high. Contrary to this, if the wages anyhow go down the carpenters and blacksmiths will not abandon their occupation. Of course, in future comparatively a lesser number of youngmen will take up these occupations. The same is true of the unskilled labourers as well. If wages are low at one place they will hesitate to leave that place for a new place, and therefore wages will remain low for a considerable time at that place.

This is even more true of ignorant and illiterate labourers. They are even ignorant about the places where they can get higher wages. This is why they do not move to places where wages are higher. The Indian labourers living in the villages are very slow to move and this is why they get very low wages. Women labourers are even more slow in moving from

one place to another, moreover they labour under several handicaps, this is why they get lower wages than male labourers. Thus it is clear that if there is free competition among labourers, they are well informed about the labour market, and there are no difficulties in moving from one place to another, then the wages will be more or less the same for similar work.

5. **Labourer is a human being.**—A fifth peculiarity of the worker is that he may work or not as he likes. A commodity gives its service unbidden. A beast of burden responds to the lash. But a labourer will work less when harshly treated. He wants rest, holidays, and better treatment.

Theory of Wages. It has already been stated before that wages are determined by the supply and demand of labourers. Now let us study in detail more about the supply and demand of labourers, after we have noted the peculiarities of labour factor. But before we actually start analysing the two controlling factors of wages it is necessary for us to remember one thing. The total labour force of a country consists of a large number of groups and sub-groups of labourers. These groups have nothing in common among themselves. For example, if the supply of engineers is short the wages of unskilled coolies will not go high. In fact the supply and demand of engineers will determine the wages of engineers and any change in their supply or demand will have no effect on the wages of other classes of labourers. In fact, as far as labour factor is concerned there are well marked divisions among them and accordingly there is not one labour market in general but there are a large number of groups of labourers comprising so many small labour markets and the demand and supply of the labourers in a particular group will determine the wage of that group only. Therefore when we say that the demand and supply of labour determine the wage, we mean the supply and demand of a group of labourers whose members are fairly homogeneous so that one man can be substituted for another without any material loss. After so much of introduction let us inquire into the demand and supply of labour.

The Utility of Labour or Marginal Productivity of Labour.—Let us first inquire into the forces which control the demand for labour. Wages are paid by profit-seeking employers, who undertake to give the workers a money income (wage) for their services. Accordingly a study of the demand for labour leads us to inquire what determines the demand of a given employer and the price (wage) he is willing to pay. To the employer wages are costs of production. He expects the workers to create the income out of which wages will be

paid. Therefore the employer's demand for labour is really a demand for the product of the labourer.

Let us suppose that a farmer has ten acres of land and with Rs. 100 worth of capital and his own labour produces 40 maunds of wheat. Let us assume that the farmer keeps every other factor of production constant but increases the labour factor by adding one labourer to his farm. Until now he himself used to work single handed. Now when he adds one more labourer the resultant produce is 50 maunds. It is clear that this increase of 10 maunds is directly due to the labourer employed. It is the result of his efforts. The utmost wage which the farmer will pay to the labourer will be 10 maunds of wheat or its cash equivalent, (the ruling price, suppose, is Rs. 5 per maund) that is, Rs. 50. Let us imagine that the farmer adds one more labourer keeping all other factors constant and this time the resultant produce is 57 maunds. The second labourer has added only seven maunds and therefore the highest wage which the farmer will pay to the labourer will be seven maunds or Rs. 35. Both the labourers are equally efficient, the reason why the second labourer has added only seven maunds to the resultant produce is that Law of Diminishing Returns has begun operating. Let us proceed further and imagine that the farmer employs a third labourer and the resultant produce is only 62 maunds. The third labourer adds only 5 maunds. Now the farmer will not pay more than 5 maunds or Rs. 25 to the labourer. But we should not forget that all the three labourers are equally efficient possessing the same capacities so that one can be substituted for the other. In this example the third produces only 5 maunds but if he is placed in the position of the first he will add 10 maunds and if the first is placed in the position of the third he will add only 5 maunds. This diminishing productivity of labour is due to the Law of Diminishing Returns operating and not to any difference in the productive capacity among the labourers. Therefore it becomes clear that no labourer will get more than Rs. 25 as his wage, because for the same kind of work and for equally efficient labourers wage cannot differ. In other words the productive capacity of the marginal labourer will determine the wage of all the labourers. The produce of the marginal labourer, that is, 5 maunds determines the marginal productivity of all the labourers and it determines the maximum wage which the farmer will pay.

The marginal productivity is not a fixed quantity. It changes with the change in the supply of labourers. If the supply or number of labourers increases the marginal productivity diminishes and if the supply of labourers declines their

marginal-productivity increases. In the above example if the third labourer leaves his job the marginal productivity increases to 7 maunds and contrary to this, if a fourth labourer is added to the farm then the marginal productivity of the labourers will go down below 5 mds. even.

Therefore it has been proved that just as the marginal utility of a commodity determines the maximum price which the buyers shall pay for that commodity, exactly in the same way the marginal productivity determines the maximum wage which the employers shall pay to the labourers. But the marginal productivity of the labourers is not fixed ; it changes with the change in the supply of labourers. With every increase in the supply of labourers, the marginal productivity declines and with every fall in the supply of labourers their marginal productivity increases. Thus it is clear that if the supply of labourers increases their wages will go down and if their supply diminishes their wages will go up.

From the employer's point of view we can say that the employer will continue to hire men as long as he gains by so doing, and he gains as long as the value of the marginal man's product is in excess of the wage rate. Therefore the lower the wage rate, the greater the number of labourers that can be employed, and the higher the wage rate the lesser the number of labourers that can be employed.

Thus it has been ascertained that the maximum wage which can be paid to the labourers is determined by the marginal productivity of the labourers. But one fact remains to be considered. The workers want their wage in advance of their employer's sale of their product. If wages are to be paid at short intervals the employer must wait and it is after some time that the money advanced to the workers can be recovered from the sale of the product. But the employer will not wait for nothing. He will charge interest on the advance payments. Therefore the maximum wages which the employers shall pay to the labourers will be marginal productivity minus the interest on advance payments.

Thus far we have been viewing the problem of wages through the eyes of the individual employer. Broadening our view to take account of the whole range of industrial enterprise as causing a demand for the labour of men and women we find that the demand of the individual employer represents the demand of the whole industry.

Supply of labour.—We have found out the maximum wage payable to the labourers but we have still to find out the minimum wage below which the labourer will not accept any wage. The minimum below which the seller of a commodity

will not sell is determined by the cost of production expenses of that commodity. But there is no cost of creating the man but there is the cost of maintaining the man, and hence the cost of maintaining the man will determine the minimum below which the labour will ordinarily not accept any wage. In other words, the "standard of living" of the labourer determines the minimum of the labourer. Now let us study the standard of living and its effect on wages.

Standard of Living.—The minimum wage of the labourers should be sufficient to maintain the labourer and his family so that the future supply of the labourers may not fall short of the demand. In other words, the standard of living will determine the minimum wage acceptable to the labourers. Ordinarily a labourer will not accept any wage which is not sufficient to keep up his standard of living, because nobody wants to lower down his standard of living, everybody wants at least to maintain his usual standard of living by all available means. Lowering down the standard of living means loss of efficiency and to go without customary and habitual consumption which is always very painful. For example, if a man is in the habit of living in a well-ventilated house and if he is forced to live in a dirty chawl (labour houses) then he will feel very miserable. Everybody wants to raise his standard of living if he can, but nobody wants to lower down his standard of living. Besides being painful the lowering down the standard of living means loss of social status and prestige as well. If a rich man becomes poor, he also loses his social status and prestige in the society. This is even more painful to a man, and this is why everybody wants to maintain his standard of living.

Besides this if the wages are not sufficient to maintain the worker's standard of living he will have to cut down his necessities of life which will mean his loss of efficiency and also the loss of efficiency of his children, that is, the future labourers. Therefore ordinarily the labourer will not accept any wage lower than that which will enable him to maintain his standard of living.

The above discussion fully brings out the fact that the marginal productivity of the labourers determines their maximum wage and the standard of living of the labourers the minimum wage ; which the labourers will accept. In between these two extreme points the actual wage is determined by bargaining between the two parties, that is, the employers and labourers. The labourers being the weaker party in bargaining have to accept a wage near their minimum. They

are out-bargained by the employers and forced to accept a wage near their minimum. Of course if they organise themselves and their trade unions bargain with the employers they may be successful in forcing their employers to pay a wage near their maximum, because by organisation the bargaining power of the labour considerably improves. But we should not forget that the labourers cannot get permanently a higher wage than their marginal productivity.

Real wages and Nominal Wages.

Nominal wages.—Refer to the amount of money which the labourer gets in return for his work. In other terms, nominal wages are money wages. For example, a man gets Rs. 25 per month in a factory, that is, his nominal wage. All wages expressed in the terms of money are nominal wages.

But money is only a medium of exchange which is wanted because it enables a man to purchase goods and services. Nobody wants money for money's sake. What really a man wants is the goods and services which are necessary for him. Because money enables him to purchase those goods and services, therefore it is accepted in payment of wages. The payment of wages in cash is a very convenient form of payment because it enables the wage earner to obtain every commodity and service needed by him. If the labourer is paid in that very commodity which he produces he would be put to a lot of botheration and inconvenience. For example, if the labourer of a sugar factory is paid his wages in the terms of sugar the labourer will have to exchange his sugar for other commodities and services which he needs. Hence wages are universally paid in money and they are known as nominal wages.

But the Nominal wages do not enable us to find out the correct economic condition of the labourers. Therefore it is customary to distinguish between nominal wages and real wages.

Real wages consists of things which the labourer can buy with his nominal or money wages. Real wages therefore refer to the amount of necessaries, comforts and luxuries which the labourer can obtain in return for his services. They depend upon a variety of factors.

Factors which determine real wages.

(1) **Purchasing power of money.**—In order to find out the real wage of a man we must first of all find out the purchasing power of his money wage. Every labourer is paid in rupees, annas and pice. But nobody can eat and drink rupees. The real remuneration obtained by him depends upon how much

a rupee will buy in the market. A labourer in Bombay gets a much higher money wage than the labourer in a village. But it does not mean that the real wages of the village labourer are so low. Money or nominal wages may be very high in a country, yet it may mean no real advantage, if the price-level is also very high in that country. The money wages of labourers in India at the time of Akbar's reign were very low and they are comparatively very high at present. But the real wage of the labourers was perhaps much higher. The reason is that the price-level at present is abnormally high. The general purchasing power of money can easily be found out by the use of the index numbers.

(2) **Payment in Kind.**—The form of payment is also a factor which determines real wages. Though a labourer is usually paid in the terms of money wages, he may yet receive some additional payments in kind. For example, a farm labourer gets mid-day meal over and above his money wage. In certain cases the employer provides free lodging. All those privileges and concessions which the labourer enjoys over and above his nominal wage are to be reckoned when determining real wages. Many services are pensionable. In determining real wages we have to make allowance for such privileges also.

(3) **Whether the job is permanent or temporary.**—This is another factor which has to be taken into consideration while finding out the real wage of a labourer. In order to find out the real wage of a labourer we have to find out whether the work is permanent and regular or temporary. For example, there is a carpenter who gets twenty days work in a month and he gets two rupees per day, while there is a clerk drawing a salary of Rs. 60 per month. Out wordly both are getting the same wage per day, but the real wage of the clerk is higher. Therefore length of the working period is an important factor which determines the real wage of the labourer.

(4) **The nature of employment.**—It is another important factor. If the work is such that it reduces the longevity of the worker, as for instance that of a railway engine driver or a blast furnace worker, then though the nominal wage is high the real wage is low. Further a work may be very dangerous and the worker may get crippled and thus he may become disabled. In such occupations the aggregate period of working life is considerably less and therefore the total real wages are also less.

(5) **The prospects of extra earnings.**—This factor also to be taken into consideration while determining the of the labourers. If the occupation is that it

time to the worker for carrying on some subsidiary occupations the worker may earn some extra income. For example, teachers carry on private tuition or they can add to their income by writing books. The doctors in the Government service are allowed private practice.

Future Prospects.—Prospects of success and of promotion in future should also be taken into consideration while determining real wages. In those occupations where there are better prospects in future people like to work at a low wage, because in the long run considering the whole life of the labourer the real wage of that man will be high who has taken up an occupation where the chances of success are better.

Pleasantness and social standing of an occupation may induce a person to accept lower wages. Similarly, the good treatment by the employer may induce workers to accept lower wages than those obtainable elsewhere. In finding out real wages all these factors have to be taken into consideration.

The distinction between nominal wages and real wages is important when we want to compare the earnings of the labourers at two different periods or in two different places. For example, if one compares the wages of war time and pre-war period, it will be foolish to compare the nominal wages, because the prices during war were very high. Therefore in order to compare wages at two different periods or in two different countries the real wages only should be taken into account.

Nominal and Real cost of Labour.—We have already discussed the difference between nominal and real wages of labourers. But that distinction was made from the point of view of labourers. Similarly the employer has to distinguish between the nominal cost of his worker, that is, the wages paid (whether in money or kind) and the real cost of the worker in terms of his efficiency. For example, two labourers may be employed at equal wage of Rupees one per day to dig earth. The nominal wage of the two labourers is equal. But whereas one labourer digs 10 cubic feet of earth in a day the other digs 20 cubic feet of earth in a day. It is clear that the real cost of the second labourer is one half that of the first. In this case even if the employer is compelled to pay Rs. two per day to the second labourer he is less costly to the employer since the employer will save on the interest and depreciation on the capital and over-head expenses of supervision etc. Both the labourers will be supplied with the same type of tools and implements and therefore the cost of interest and depreciation on capital will be in the case of the second labourer half of the first. Similar conditions exist in all branches of production. Wages may be high, but

real labour cost may be low. This is why Economists hold that " Low Wages are Dear Wages ". A low wage usually accompanies low productivity and inefficiency and is not necessarily economical to the employer.

If the wage is not sufficient to enable the worker and his family to maintain a reasonable and customary standard of living, the efficiency of the worker diminishes. Hence an increase in wages within certain limits is accompanied by greater efficiency which means less real cost of labour to the employer. Therefore ' High Wages ' are in the long run less costly and the ' Low Wages are Dear Wages '.

Long hours and Inefficiency.—Similarly, very long hours of work may not bring better results for the employer in all cases. Very long hours of work result in a loss of efficiency. Employers have known by experience that up to a point reduction of hours is accompanied by greater productivity on the part of the worker. In India when hours of work in factories were restricted to 12 hours per day by law it was found that production instead of going down went up. But there is a point of maximum efficiency beyond which it would not pay to make further reductions in the working period. This point can be determined only by experience.

Difference in Wages—The theory of wages deals with the factors which determine the general rate of wages. But it does not explain why the wages differ in different occupations. In fact while discussing the theory of wages we only considered the supply and demand factors but we did not discuss anything about the reasons which are responsible for the difference in wages. There are two kinds of differences in wages. Firstly, wages differ in the same occupation, and secondly wages differ from occupation to occupation. Now we will take both these cases of differences.

Lack of uniformity of wages in the same occupation.—For purposes of explaining the theory we assumed that the workers in each specific line of occupation are so homogeneous that one can be substituted for another at will. This assumption has led to the conclusion that all members of a given occupation will receive the same rate of wages that all carpenters will be paid alike, all stenographers, all machinists and all school teachers should get the same wage rate. But everybody knows that this is not strictly true. The wage rate differs for different members within an occupational group.

Lack of uniformity in the earnings of different members of the same occupational group, is mainly due to the fact that labour group is quite homogeneous in productivity. If we

any occupation at random, we will observe that all its members do not have the same productive efficiency. There are some workers in the group who are very efficient while there are others who are comparatively inefficient. But closer observations show that these differences in productivity are greater in the case of some labour groups than others. In the case of very unskilled type of labour the differences in the output of one member of the working force as compared with another is usually very slight. So also with the great army of workers in the factories. There is a marked uniformity in productivity among millions of workers working in the factories. The differences are great among skilled craftsmen, and they are greatest of all in the highest labour groups, and learned professions, and superior grades of managers. Introduction of machinery in nearly all trades and ever-growing use of machine is bringing forth greater homogeneity of large labour groups. The increasing mechanisation of industry tends to make the workers more interchangeable in the gigantic productive mechanism of society levelling down the differences of individuals.

Difference of wages in different occupations.—As has been said before wages differ in different occupations. Let us study the factors which are responsible for this difference in wages.

As before, let us again assume that all labourers are equally efficient and that there is full and perfect competition among them, so that the choice of occupation is free and every worker can enter any profession he likes. Will there be any difference under these conditions. Yes, there will be difference in wages due to the following reasons:

(1) Agreeableness and disagreeableness of the occupation.—If the occupation is such that it gives pleasure to those who are engaged in it, the wages are bound to be low, because there will be a tendency among workers to join that occupation in larger numbers on account of its agreeableness, and, the supply being large, the wages will be low. Wages in a disagreeable occupation must be higher than those in an agreeable occupation, otherwise no one would take to the former. If the same wages are paid to the farm labourer and the labourer working in a coal mine, who will like to work in a mine where work is not pleasing and the health of the worker deteriorates? The wage which is paid to the Public-executioner is, in relation to the quantity of work done very high, because the work of the executioner is so detestable.

In certain occupations there is a greater amount of rest, or there is a greater attraction or greater social prestige attached to the occupation. Young men may be attracted towards such

occupations even though the wages may be lower than other occupations. For example, a young man may prefer to become a school teacher at a low salary rather than accept a clerks' post in a bank at a slightly higher salary. Similarly, an young man may accept a job in the editorial staff of a paper at a low salary rather than accept the post of a clerk at a higher salary because there is greater social prestige attached to the occupation of an editor.

(2) Training required for the occupation.—Some occupations require a longer time to learn and a much more expensive course of instruction than others. Earnings in such occupations must be higher than others which require less or no training. For unless the earnings are higher nobody would like to spend money and time in learning these trades. For instance, if the wages of engineers and masons are the same who will undergo the long and expensive training for becoming an engineer.

In acquiring the required training and efficiency for becoming an engineer one has to get a 'B Sc. degree in a university and then has to undergo a long training of several years in an Engineering College. Thus one has to spend a large amount of capital in his training. He has to devote several years in getting the required training which means the loss of earning period. An unskilled labourer can start earning something even at the age of 14 or 15 years. The engineer begins to earn at the age of 25 or 26. Thus he has a comparatively shorter period of earning. Therefore if the wages of an engineer are not high enough to cover the cost of training and to compensate him for the loss of earning period as well as for the risk which he has undertaken nobody will like to become an engineer if the wages of an engineer are the same as that of a mason or an unskilled labourer. This is true of, all other such professions.

(3) Regularity or irregularity of employment.—If work in any occupation is intermittent the rate of wages must be higher than in occupations where work is regular and constant. In the former occupations workers have to remain idle on occasions and the wages earned during the working period must be high enough to leave a surplus with which they could maintain themselves during the idle period.

(4) Chances of success. Where there are greater chances of failure, the wages must be correspondingly high enough to cover the risk of failure. But if the occupation is such where though the risk is comparatively high there is a hope of a few chances of great prize or great position, then it usually attracts competitors in such large numbers that the average remuneration may be very low.

Need of greater trustworthiness.—There are certain occupations in which there is a greater need of trustworthiness or reliability. In such occupations the remuneration is bound to be high. For example, goldsmiths and jewellers are better paid because they handle valuable mineral. Nobody will entrust his gold to them if they are not trustworthy or reliable. Similarly, the wages of a manager of a big factory or Bank are also high because besides other qualities they must be absolutely reliable.

These are the causes of difference in wages if all labourers are equally efficient and if there is perfect mobility of labour. But we have already seen that all workers are not equally efficient and therefore wages differ according to the ability of workers.

The second assumption that labour is perfectly mobile so that every worker can enter any occupation is certainly far from the truth. Mobility between different occupations is very imperfect. This is why we find that in some cases most dirty and disagreeable work instead of being better paid than others, is paid very low wages. The reason is that workers cannot easily leave their ancestral occupation and therefore remain where they are even though wages are very low.

Wages of women workers :—Women labourers often get lower wages for the same kind of work than men. The following are the causes of this difference between wages of men and women.

One cause of lower wages being paid to women is that they possess in general less physical strength and endurance than men. Another cause is that most of them are not permanent workers. They work in some factory or take up a particular occupation only for a temporary period and finally give it up when they are married. Therefore they take up that work which requires less time to learn it. A very important reason why the wages of women are less is that very few occupations are open for women, choice of occupation is not free to them. Custom, lack of training, and inability to work very hard have shut them out from many occupations. And in those occupations which are open to women there is an over-supply of workers and hence their wages are low. Moreover because women are temporary workers they cannot organise themselves into strong trade unions, and therefore they are not in a position to secure better wages from their employers.

Standard of living and wages — It has already been discussed before, that the standard of living determines the minimum wages which labourers will accept. If the standard of living of

labourers is low they will be prepared to work on low wages. On the contrary, if their standard of living is high then they will not be ready to accept low wages. There is a real relationship between the standard of living and the wage rate which should be understood by students of economics. There are two ways in which a high standard of living may be effective in raising the wage rate or preventing its decline. In the first place, entrenched standard of living may operate to increase the bargaining power of the workers and enable them to resist a reduction in wages or to win an advance. To have this effect the worker must be so firmly attached to his standard that he will refuse to work for a wage which involves a degradation of this traditional mode of life. When this is true the standard of living sets the lower limit to the range of wage bargains, a gradual rising standard will elevate this lower limit and cause the actual rate to approach more closely to the point determined by marginal productivity. But this should not be forgotten that the wage cannot be maintained by these means at a point above the marginal worth of the workers for any considerable length of time.

In the second place, the standard of living is one of the factors which determines the marginal productivity of the workers, and thus it plays a part in determining wages. The standard of living affects the productivity of the individual workmen and it also indirectly exerts control over their numbers. It is common knowledge that a close connection exists between the productive efficiency of the worker and his standard of living. More nourishing food, better clothing and better housing conditions improve the physical and mental alertness of the workman. Besides this the standard of living operates over long periods to set a limit upon the numbers of workers in the different occupational groups, as well as to the total number who seek employment in industry. A higher standard of living puts a check on the growth of population and therefore raises the marginal productivity of the labourers. But it should not be assumed that by raising the standard of living the efficiency of the labourer will immediately go up. It will take some time for the efficiency of the worker to go up.

Effect of social customs and wages.—In certain cases the determination of wages is very much influenced by the social customs and traditions. In India customs are even stronger, they play a great part in determining the wages of the workers. For example, the wages paid to the farm labourers, barbeis, carpenters, washermen and other menials of the village are customary and they become more or less binding on both the

parties. The village menial will usually not get a wage more than the customary wage in the village and the village people will not allow any outsider to compete with the village menials. But if the customary wages fall very much short of what are available in the neighbourhood then the customary wage will also change and another customary wage will be established.

Besides custom the population of the country also has a great influence on the wages of the labourers. If the number of labourers is large the rate of wages will be less. This is why in certain countries efforts are being made to restrict the growth of population. Young men and women marry late, they adopt birthcontrol devices and send the surplus population to colonies and dependencies. By these devices they try to check the population from rapidly growing so that the wages may remain at a high level.

The population in India is growing at a rapid rate and in the absence of industrial development the growth in the population brings down the wages of the workers. This is one of the reasons why wages in India are lower than in other countries. Therefore in order to increase wages in India it is necessary to improve their efficiency, to develop industries and to check the population from growing rapidly.

Trade Unions and wages.—In the days of handicrafts the condition of wage earners was much better. If any master craftsman engaged the services of a labourer or apprentice he could not ill-treat him because the labourer was as important for the master's trade as the master himself and therefore the master could not easily dispense with his services. Moreover the master also used to work with the labourer and therefore he could realise the difficulties of the labourer and the relations between the master and the labourer being very close and intimate it was not possible to exploit the labourer and maltreat him.

But with the establishment of factories and large scale production the condition of labourers underwent a great change. In the factory system there is no contact between the master and the labourer. Thousands of labourers work in a factory and therefore any individual labourer is of little importance in the concern. In Factories production is carried on with the help of machines and the machines are worked with mechanical power. The labourer only attends the machine, he is the servant of the machine and therefore cannot determine the speed of the work. Factories can work day and night with the help of electricity and therefore if the master is given a free hand he can over-work labourers by making them work for long hours. Moreover risks to life and limb are greater in a factory.

Besides these handicaps the labourers are very weak in bargaining capacity. They cannot bargain on equal footing with the master and therefore the master can out-bargain them. In short under the factory system the employer has great opportunities of exploiting the labourers, because he is comparatively very powerful and resourceful. For example, if in a factory there are ten thousand labourers then the master is ten thousand times more strong than the single labourer. Of course, if all the ten thousand workers also organise themselves into one body and negotiate with the employer as one body then their bargaining capacity will improve. This is why with the establishment of the factory system the trade union movement came into existence.

Trade Unions brought about a rise in the wages of labourers. With the growing strength of the trade unions the bargaining capacity of the labourers increased and they were in a position to force the employer to pay wages near their maximum point, that is, the marginal-productivity of the labourers. Otherwise the employer being the stronger party will pay to the labourer a wage near his minimum which is determined by the standard of living of the labourers. Moreover the trade unions by their other uplift activities bring about an increase in the productive capacity of the labourers, and therefore help them in securing higher wages. But ordinarily the trade unions also cannot force the wages to go higher than the marginal productivity of the labourers.

Trade unions also bring about a uniformity of wages. They insist that uniform wages should be paid to their members. In fact the wages are fixed by negotiation between the employer and the trade unions.

Hindrances to free movement of labourers and choice of occupation.—The theory of wages assumes that there is free movement of labourers from one place to another and from one occupation to another. In other words, perfect occupational and geographical mobility is assumed. But in reality perfect occupational and geographical mobility is never obtainable. In the first place, labour is the most immobile factor of production. We have already discussed above the forces which are responsible for the comparative immobility of labourers. Man has his own likings, sentiments, associations, prejudices and fancies, this is why he does not like to divorce himself from his old place of residence or ancestral occupation. Moreover the difference in the mode of living, differences of climate, language, religious beliefs and customs also check the free flow of labour from one place to another. Though the rapid development of means of transportation and communications

and growing literacy among the labourers are doing away with these geographical barriers yet to some extent they still continue to exist.

The theory of wages does not only assume free and unrestricted flow of labourers from one place to another but it also assumes free competition among the labourers on the one hand and the employers on the other. But this assumption is also not very true. The combination of labourers and of employers in the form of Trade Unions and of Employer's Associations modify to a very great extent the free play of competition. The Trade Unions by organising labourers into non-competing groups do away with competition among the labourers. The labourers who are the members of a Trade Union do not enter into a contract with their employers in their individual capacity. The Trade Union negotiates with the employers on behalf of all the labourers in a body. Thus no member of the Trade Union is allowed to compete with the other. On the other hand, the employers have organised themselves into Mill-owners' Associations, Chamber of Commerce or Employers' Associations.

Again we have already discussed the influence of tradition in fixing the wages and the remuneration of labourers and professional workers. For instance, in Indian villages the wages of the artisans, village servants and labourers are fixed by old-established practice and tradition. Similarly, in the case of such professional occupations, such as those of medicine and of the law the remuneration is again based on old established practice and tradition and not adjusted by competitive forces in accordance with the net advantages of these occupations, or with the relation between the demand for such services and their supply. In such cases if the remuneration is low it remains low for a comparatively long period of time and if it is high it remains as such.

Finally, we come to the question of choice of occupations. In most cases the workers are not in a position to select any occupation they like. In the first place, the number of occupations open to members of lower class is restricted. On account of poverty, lack of education, difficulty in obtaining information, and absence of vision and ambition, the workers are unable to get into any but certain branches of work and from generation to generation the tendency is for certain classes of workers to remain in the same grade of occupation. The farmer or agricultural labourer seldom moves on to a more paying job, and a worker working in a particular industry, say, textile industry is so adapted to the conditions and environment of that industry as to find movement difficult.

This tendency is more pronounced in the case of more liberal professions, where the necessary proficiency can be acquired only after many years of expensive and difficult training. The cost of entering into the professions of law, medicine, engineering etc., is very high, and the doors to such occupations are closed to all except those who have fair means and the necessary opportunity.

Among poorer classes little choice is possible and few are capable of giving their children the necessary training for such remunerative occupations. Another reason is that poor classes even though they may acquire the means and get the opportunity, have neither the education nor the vision to estimate the advantage of bringing up their children for a higher grade of work. Moreover in certain occupations especially those of higher grade, the entry is made extremely difficult by imposition of heavy fees, the demand for exceptionally high qualifications, and of social status.

Thus on account of these and similar reasons the supply of labour in lower grade occupations is generally quite large and the remuneration of such labour is consequently very low. On the other hand, remuneration in more highly-skilled occupations and in the liberal professions is comparatively high because of factors which make the entry into those occupations difficult and expensive.

Systems of wage payment.--The traditional method of wage-payment has been to base the wages on a unit of time. The hour, the day, or a month. This method is called 'Time Wage method.' In Time Wage method differences in individual productivity cannot be taken into consideration and it stifles the ambition and initiative of better workmen. To give an illustration. If there are two labourers one very inefficient and the other very efficient, and both get 10 annas per day as wages, then the efficient labourer will have no incentive to do more and better work. But time wage method is adopted in those industries where it is not possible to measure the work done by individual workers or where work requires great care and skill.

Piece wage method.--In piece wage method wages are calculated on the basis of the work done by the labourers. For example, if the piece wage rate is one anna per yard of cloth woven, then in a day if one labourer produces 20 yards he will get Rs. 1-4 and if another produces 40 yards he will get Rs. 2-8 as his wage. Piece wage method puts premium on efficiency and induces the labourer to do utmost work he is capable of.

Minimum Wages.—The belief that wages too low to provide a decent standard of living are immoral or socially undesirable has led governments to pass laws prescribing a minimum below which the wage rate must not fall. Beginning with the legislation of Newzealand in 1894 this movement has spread through many countries in the west, so that minimum wages are fixed by law and no employer is allowed to pay wages below the minimum legal wage.

Premium Bonus System.—We have already discussed the time wage and piece wage method and we have also noted the good and bad points of both these methods of wage payments. During recent times many attempts have been made to devise methods of industrial remuneration which will be more suited than time and piece work methods to the requirements of particular occupations and which will also combine the advantages of these two systems and at the same time avoid their defects. They are known collectively as Premium Bonus Systems.

The Bonus Systems seek to remedy the great defect of the time-rate system in that the worker has no inducement to do his best, at the same time these systems try to overcome the tendency to inferior work which is the chief defect of the piece wage system. In these systems there is an agreed standard of output for each class of work, and a bonus is paid for any output in excess of the standard. In order to prevent the rushing of work and over-strain on the part of the worker, it is usual to arrange the bonus on a gradually diminishing scale so that incentive to increase the output is reduced. For instance, the output of a worker in a day is 40 per cent. more than the standard output fixed by the management, then he will get 25 per cent. more wages than the standard wage. But if the output is increased by 60 per cent. over the standard output then the wage will increase only by 30 per cent. of the standard wage.

Sliding Scale Methods.—In some industries wages are based on the selling price of the finished goods. Thus, if the price of the product increased, the wages also increase and if the price falls the wages are also lowered. This method is most defective from the point of view of the labourers. The labourers are made partners but without any share in the management of the business.

Sliding scales according to the cost of Living :—It is generally recognised that the great increase in industrial unrest is largely due to the fact that the nominal wages of labourers are not raised by the employers as the cost of living rises with rise in prices. What usually happens is that when prices rise

and consequently the cost of living also rises the labourers demand a proportional increase in their nominal wages so that their real wages or in other words their standard of living may remain as before. But the employers are usually very reluctant to raise the wages and if at all they agree to raise nominal wages the increase in nominal wages is much less than the rise in prices. This results in unnecessary irritation and labourers are forced to declare strikes.

In order to avoid this difficulty wages are paid on sliding scale method, so that if the prices rise the wages are automatically adjusted to the rise in general level of prices, and if the prices go down, the wages are adjusted to the reduced price level.

The fluctuation in the cost of living is measured by the index numbers. Index numbers measure the percentage rise and fall of general level of prices and therefore they are taken as the basis for adjusting wages of labourers.

Profit Sharing and Co-partnership.—Among many schemes which have been devised during recent years with the object of creating a greater degree of satisfaction among the labourers and to create industrial peace, the ' Profit Sharing ' and ' Co-partnership ' take important place.

Under ' Profit Sharing ' over and above ordinary rates of wages based on time or piece rate basis certain percentage of the net profits of the business is distributed among the workmen as cash bonus.

The most important advantages of this system are that it minimises friction between the workers and the employers. It binds the worker more closely to the firm, and finally that the share in profits provides the workers with an incentive to greater output.

In some rare cases the employers have allowed the workers to utilise their cash bonus for purchasing the shares of the concern and their representatives are also taken on the Board of Directors. But even in such cases the voice of the labourers is nominal, though they can become share-holders of the concern. This system is known as " Co-partnership " system.

These efforts to evolve a better method of paying wages which may bring about better relations between employers and labourers have not been fully successful. They have been partly successful in improving the relations between the two. The problem remains unsolved as to how to bring about a permanent and amicable settlement of this thorny question. The socialists assert that it cannot be achieved under capitalistic system of production.

Besides wages there are other things which also should be considered in this connection. Adequate wages are absolutely necessary for keeping up the standard of living of the labourers and to enable them to live a happy life. But hours of work are equally important. If a labourer gets high wages but he has to work for excessively long hours his health will break down and his efficiency will decrease. So while the trade unions try to obtain higher wages they also try to secure reasonable hours of work. This is why in all countries of the world Factory laws have been passed which fix the hours of work of the labourers. In India 9 hours working day has been fixed by the Factory Act. Besides factory laws Workmen's Compensation Acts have also been passed which provide compensation to be paid by the employer to the labourer in case he is killed or disabled on account of accident in the factory.

Under the present industrial system there is a great conflict going on between the labourers and the capitalists. Labourers organised as they are under the trade union movement are conscious of their power and want to compel the employers to pay them higher wages and better conditions of work. On the other hand the employers try to resist the attempt of the labourers. This brings about strikes and lock-outs in the industry and at times the industry is dislocated and production is checked. Capitalists want to pay labourers as low wages as possible in order to obtain higher profits.

This constant conflict of labourers and capitalists and universal misery and poverty prevailing among the majority of the masses on the one hand and fabulous riches accumulating with the capitalists on the other has led many and specially the socialists to demand that the state should take over the industries.

CHAPTER XXVI.

INTEREST.

What is interest.—Interest may be defined as the income which goes to the owner of capital whether he uses it in his own business or lends it to somebody else.

Why interest is paid.—The essential problem concerning interest can be stated in the following terms. Why should any individual who borrows from another a given quantity of commodity represented by a given quantity of money engage to return after a fixed time has elapsed not only what he borrowed but something in addition. That the amount borrowed should be returned seems understandable, but why should the lender get anything over and above it? This premium which is expressed in the terms of percentage paid each year is interest. The borrower engages to pay back not only the principal, but five per cent. or near about in addition for each year that elapses. To ascertain why this additional percentage is paid, is to solve the problem of interest.

The answer to the question, why interest is paid is that capital is productive. It helps production. Without capital production will be unthinkable in modern times. Interest therefore is the price paid for the use of capital.

What determines the rate of interest.—Interest is the price paid for the use of capital, and like all prices, it is determined by the forces of demand and supply. Now let us study in detail the factors which influence the demand and supply of capital.

The demand for capital arises because it is productive of more wealth. Producers know the great utility of capital and therefore they need capital for their business and industry. But capital is also needed for unproductive purposes such as Government loans for financing a war.

Because capital is productive, therefore the borrowers pay interest for the use of that capital. But the maximum interest which they will be ready to pay is determined by the marginal productivity of capital. Everybody borrows capital to be invested in some productive undertaking, because he wants to produce more wealth with it and therefore the utmost he can pay for the capital will be determined by the marginal productive capacity of the capital.

Marginal productivity of capital.—Let us suppose that everybody is equally familiar with the capitalistic ways of production, that is, the application of tools, machinery, materials and the like and they are equally available for all. All of those who wish to use them (capital goods) are freely competing

with each other. No borrower is getting control of any particular kind of capital. Therefore competition will bring the return in all cases of investments to the same level. What will determine that uniform level.

“ Diminishing productivity of capital.—Productivity of capital conforms to the law of diminishing marginal productivity. This is found to be equally true whether viewed from the stand-point of society as a whole or from that of the individual businessman. In taking the social point of view, we must define the productiveness of capital as its power to increase the output of goods per unit of labour expended. If only a small quantity of capital is available for the society it will be employed to equip labourers with the most essential labour-saving devices, for example, the implements used to cultivate the soil, tools of the craftsman etc. As the quantity of capital increases, other things remaining constant, it will be applied to uses which grow less and less necessary for the material welfare of mankind, until the last instalments of the capital supply are less effective than the first instalments of capital in producing more wealth.

To the individual enterpriser as well the productivity of capital diminishes as the supply of capital increases. The individual businessman after he has devised that combination of factors of production which results in the greatest efficiency for the enterprise as a whole will find that money returns from successive increments of capital expenditure diminish.

Thus from the point of view of individual businessman, borrowed capital is also subject to the law of diminishing marginal utility or diminishing marginal productivity which we have seen determines the maximum price which the purchaser will pay for all kinds of goods ; and therefore the price which the borrower of capital will be ready to pay for its use will be determined by the marginal productivity of the capital to him. The marginal productivity of capital like that of labour diminishes as the supply increases and increases as the supply diminishes

Supply of capital.—The supply of capital depends upon two factors—upon the capacity to save and upon the will to save. The former is determined by the individual's surplus of income over expenditure and the latter by a variety of causes like foresight, family affection etc.

Every foresighted and wise man wants to save in order to lay by sufficient for future needs. While discussing the accumulation of capital it was pointed out that there are some own future liabilities and certain unknown future liabilities which every wise and farsighted man should provide for.

In fact a man by foregoing the present consumption of the last units of money and saving them for future use gains in utility as well. For example, take the case of a man whose has an income of Rs. 500 per month. The last hundred or two hundred rupees will be spent at present on luxuries or comforts. But if they are saved for future the utility of this saving will be much more because at that time that saving will be utilised for some very urgent purpose. For instance a man needs sufficient funds for the marriage of his daughter, educating his son, and maintaining himself and his family in his old age when his income will cease. Thus, a certain amount of wealth will be saved by people without any inducement in the form of interest. There may be interest or no interest, a certain amount of capital will be forthcoming in the society. Even if banks charge something for safe custody of funds (negative interest) some saving will be effected.

But industry and trade require a large quantity of capital. The voluntary savings of the society do not suffice for the needs of industry and trade.

Cost of capital supply.—People may spend the whole of their income in consuming present goods. But when they save, they abstain or wait from present consumption, such abstinence or waiting is disagreeable. Hence in order to induce people to save we must offer them certain inducement as compensation for their sacrifice. Moreover there is a tendency among people to put premium over present goods over future goods of the like kind and amount. This premium arises from the fact that men as a rule prefer the present to the future. Future undergoes a discount when reviewed from the present. Therefore some inducement in the form of interest has to be given in order to induce people to save.

But the rate of interest which will induce people to save will differ in the case of different people and groups of people. It will be determined by the rate which will overcome the impatience of an individual to spend income. The degree of impatience of an individual to spend income depends first, upon the size of income, secondly, upon the composition of income, thirdly upon the certainty of enjoying the income in future, and lastly upon individual characteristics, like foresight, self control etc. The higher the income the greater is the chance that present wants will have been more satisfied. Hence the individual will discount the future at a lower rate. Converse happens with poor persons. If the future income is certain then the individual will discount the future at a lower rate, but if the future is very uncertain he will discount at a higher rate. But above all everything depends upon the

personal character. If the individual is of a spend thrifit character the degree of his impatience to spend would be higher.

Therefore those who are very impatient to spend the income at present will not be induced to forego the present consumption and save it unless a very high rate of interest is paid. While those who are less impatient will forego the consumption and save even when the rate of interest is low. Therefore the higher the rate of interest, the larger the supply of capital that will be available, and the reverse will be the case when the rate of interest is low.

Now the theory of interest can be summarised in the following words ; " The aggregate demand for and supply of savings (capital) determines the rate of interest. Just as the value of a commodity is equal to the marginal utility or the marginal cost of production, so the rate of interest tends to equal the marginal productivity (the most important factor on demand side) or the marginal waiting.

It has been stated before that some supply of capital would be forthcoming even if there be no interest. A greater amount would be supplied if the rate of interest were nominal, but the total amount supplied would not be sufficient for the satisfaction of demand. Hence the rate must rise until the required amount of capital is supplied. Therefore the rate of interest must be high enough to attract the marginal increment of saving.

Gross and Net interest.—Net interest or pure interest refers to the payment for the use of capital, when there are no risks of non-payment, when there are no inconveniences and no additional work consequent on the loan.

But in actual practice the sum that is paid by the borrower to the lender includes, besides pure or net interest, payments to cover the risk involved in money-lending, payment on account of the troubles and inconveniences to which the lender is put and also payments on account of the work that the lender is called upon to do and is known as ' Gross interest.'

In actual practice no borrower is good enough to pay only net or pure interest. The rate of interest which is paid by the borrowers in the market is gross rate of interest, so that the pure or net rate of interest is an imaginary rate of interest which is determined by the supply and demand of capital in the society and does not include any payment for risk undertaken by the lender, inconvenience and botheration inherent in moneylending business.

Gross rate of interest includes (1) net or pure rate of interest, (2) insurance premium for risk undertaken by the

money-lender (3) payment for maintaining accounts and carrying on other duties associated with money-lending business, and (4) payment to the money-lender for the inconvenience and botheration which he has to undertake in money-lending business.

Insurance for risk.— Whenever anybody lends money to a borrower the lender undertakes a certain amount of risk. According to Marshall there are two kinds of risks. Trade risk and personal risk. When an individual invests his capital in some business or industry he undertakes a certain amount of risk. The trade risk arises from the fact that before production is over the demand may change, or the price of raw materials may fall, or other substitutes may come in the market and hence the price of the product may also fall. The personal risk is due to the fact that the borrower may be dishonest or even if he is honest he may be incapable of paying back the sum. This risk of not getting back the capital or losing the capital will only be shouldered by the capitalist if he gets a compensation for this risk-taking service. For example, let us suppose that a money-lender advances ten thousand rupees to different borrowers. Though he takes every possible care and precaution in correctly ascertaining the credit-worthiness of his borrowers yet he knows by experience that at least one hundred rupees will never be paid back. He does not know who will not pay back his loan, but he knows it for certain that rupees one hundred will become bad debt. Now if the net rate of interest is 2 p. c. and he charges only 2 p. c. from his borrowers he will actually get less than 1 p. c. on ten thousand rupees advanced to his borrowers, because one hundred rupees will be bad debt. Therefore he must charge a little more than 3 p. c. from his borrowers in order to obtain the net rate of interest, that is, 2 p. c. This additional charge of more than one per cent. is the premium for insuring the risk involved in lending money.

But risk involved in lending money differs in different businesses and with different persons. Some borrowers are more credit-worthy, they are very honest and reliable, their business is very sound and therefore the chances that they will not pay back their loan are very remote. On the other hand, there are others who are not very credit-worthy, they have no security to offer and they are not very honest. Between these two extremes there are numerous degrees of credit-worthiness. The Government of a country is the most reliable borrower because the whole nation is responsible for the loans which the Government of the country has issued. But no borrower is so credit-worthy that no risk is involved in lending money to him. Even

in the case of Government there is a very very remote risk that the Government may change and the new Government may repudiate the loans taken by the previous Government. Of course the ratio of interest paid by the Government is the nearest to the net rate of interest. Thus there are different groups of borrowers and the risk involved in giving them loan is different, and therefore the charge made for insuring the risk will also be different with different classes of borrowers.

Management Expenses.—Money-lending business is carried on either by a bank or a money-lender and both of them have to manage their business just as any other business is managed. Accounts have to be kept, arrangements for receiving or collecting payments of capital and interest have to be made, and legal actions have to be taken in case of default. Besides all other allied activities have to be performed. This means that establishment and managerial expenses have to be incurred. The book-keeping, and other establishment expenses vary with the amount of loans. The percentage of management expenses is higher for small amounts of loan and lower for big amounts. For example, if a bank gives one lakh of rupees as loan to A and one hundred rupees to B, the clerical work involved is exactly the same in both the cases. Therefore the charge made for management expenses is higher in the case of small amounts and lower in the case of big amounts. This is one reason why the modern commercial banks discourage petty borrowers and they have to go to money-lenders.

Payment for Botheration and inconvenience.—In lending money the capitalist may have also to undergo botheration and inconvenience. The greater the inconvenience involved in lending money, the greater will be the charge made by the capitalist to compensate him for the inconvenience which he undertakes by lending money. For example, if a borrower wants to borrow for a very long period of time or he pays back the loan at a time when that sum cannot be invested at a high rate of interest, the lender will naturally charge a higher rate of interest from such a borrower.

Gross interest therefore includes net rate of interest plus charges for all these services which the lender of money renders. But as the risk involved in lending to different borrowers differs, and the management expenses are also different with different borrowers, the gross rate of interest also differs with different classes of borrowers. This is why we find that the Government gets loan at very low rates of interest, *i.e.*, a big businessman or industrialist has to pay 6 p. c. ordinary cultivator has to pay a much higher rate of

interest. But this does not mean that the exorbitant rate of interest charged by the Indian money-lender in the villages can be justified on this ground.

Future of interest.—As we have already read the rate of interest is determined by the forces of supply and demand. Now let us see what will be the tendency of interest rate in future.

As man grows rich and advances in the scale of civilisation he becomes more farsighted and his tendency to accumulate wealth increases. The primitive savage never thought of the next day. But as man progressed, he has begun to save something for the rainy-day. The age long experience of human beings tells us that with the progress in civilisation people will discount the future at lower rates. Really speaking the capacity of the people to save will greatly increase owing to greater wealth production in the country and increased efficiency of the people, so that along with the development of agriculture, industries and trade in the country, accumulation of wealth will proceed fast. So ingrained is the habit of accumulation among the prosperous class of modern society that it seems to continue irrespective of the rate of interest. It is only after the rate of interest remains low for a very considerable period of time that this tendency gets a set-back. Hence the supply of capital would continuously increase. But as we have seen before, owing to the operation of the law of diminishing returns, the net product of units of capital will fall, that is, the marginal product of capital will have a tendency to fall.

But whether it will fall or not will depend upon the future demand for capital even if there be no progress in the improvements of the methods of production and inventions. The demand for capital is bound to increase with the increase of population. The additional population will necessitate more wealth production and consequently greater supply of capital. The additional labourers have to be equipped with tools and machinery etc. By nature human wants also multiply and increase. There is no limit to human wants. This growing force of increasing human wants will also compel the man to newer productive activities and therefore the demand for capital will increase.

On the whole, therefore, there is every likelihood that the rate of interest will fall in the future. The question can be asked "will the rate of interest fall to zero?" There is no possibility that the rate of interest will fall to zero because if the rate of interest falls to zero the savings will diminish and consequently the supply of capital will go down. Therefore the rate of interest can never fall to zero. From the point of view of demand as well, the rate of interest can never fall to

zero, because it will mean that marginal productivity of capital is zero. When the marginal net product is nil, that means we cannot increase the product further by investing more capital. We have reached that state in which our productivity has become the maximum. It means that all our wants have been satisfied. But we know that this is not possible. Wants and desires in general are insatiable. So long as our desires remain unsatisfied, there will be possibilities of employing capital. The rate of interest therefore can never fall to zero.

Justification of interest — In the ancient times and middle ages the religious leaders and philosophers vehemently condemned the practice of charging interest. They said that lending money does not entail any sacrifice on the part of the lender and therefore it was highly immoral to charge any interest. Christianity and Islam prohibited interest. Philosophers like Aristotle and others condemned usury in no measured terms. In those times there was not much scope of profitable investment of capital. People used to borrow mostly for consumption purposes. Mostly the needy and poor persons or those who had fallen in bad days needed loans. The religious leaders and philosophers being very kind-hearted did not approve of interest being charged because in their opinion it was nothing but making profit out of the misery of others. Hence they condemned interest.

But, as we all know, in these days most of the loans are taken by big industrialists and businessmen who want capital for production purposes. Take the case of a factory owner. He wants 5 lakhs of rupees from a bank in order to purchase the required raw material and pay wages during the period of production. The factory owner will earn a profit of 20 p. c. on this capital and therefore it is in the fitness of things that he should pay 6 p. c. to the bank or any individual who has lent money to him. The ancient people had no idea of the nature of the services of capital.

In recent times the criticism levelled against interest by socialists has again brought the question of justification of interest to the forefront. Value according to socialists is determined by the amount of labour required in production, and hence value should belong to labour alone. But in this present capitalistic organisation of industry labourers are paid subsistence wages and the surplus is appropriated by the capitalist. Hence interest according to socialists is robbery. In the socialist state therefore there could be no interest.

Here it is difficult to discuss whether private property is justified or not, but one thing is clear. So long as the society is the institution of private property, interest will have

to be paid by those who use capital owned by others. Otherwise accumulations of wealth will not come forth in sufficient quantities and the production of wealth will be checked.

Mobility of Capital.—While discussing the mobility of capital we mentioned that labour is comparatively less mobile factor because labour and labourer are inseparable. The labourer himself has to move to place where he is required to do the work, and therefore he feels reluctant to leave his village and country because of differences of climate, language, mode of living, and patriotism. Moreover the nature of work and treatment of the master also influence the mobility of labour. Capital does not suffer from any such handicap and this is why capital is the most mobile factor. Capitalists are always on the look out for greater remuneration and wherever there are chances of getting more profits or interest capital has a tendency to flow towards that industry and that particular country. This is why British capital and American capital has migrated from home countries to distant countries which are undeveloped and where the rate of interest is very high. But on account of political difficulties the capitalists mostly invest their capital in those countries where they have political influence. But in India on account of lack of sufficient banking, transportation, and communication facilities and backward industries the capital also is not very mobile.

The capitalist class.—The role played by capital in the productive system of society will grow in importance with the passing years as industry develops and new scientific inventions take place. Our civilisation is founded on the use of great quantities of capital, progress in human well-being—nay the mere support of life for an increasing population requires that we set aside each year an enormous amount of income for the repair and replacement of existing capital instruments and addition. The capitalistic mode of production calls for two distinct kinds of service—working and waiting.

Now unless the productive activities are controlled and carried on by the state as happens in a socialist state, individual capitalists are needed to finance any productive undertaking. As long as society relies on voluntary saving for the provision of capital there must exist a class of capitalists and they must obtain their remuneration in the form of interest.

Usury.—We have already discussed how in ancient times and middle ages, interest was condemned as immoral income and was prohibited. But in modern days the services performed by capital are very well recognised and therefore with the exception of socialists no body objects to reasonable interest. But in certain backward countries and specially

among poor people who are ignorant and do not possess enough security the money-lender charges exorbitant rate of interest. This unreasonable and exorbitant rate of interest must be prohibited by law. This is usury pure and simple.

In India the rate of interest charged by the 'mahajan' from his debtor is mostly exorbitant. In the villages and specially in backward parts of India the rate of interest is as high as 30 to 75 p. c. which is very high indeed, and this is why in most provinces laws have been made to regulate the rate of interest.

CHAPTER XXVII.

PROFITS.

The concept of Profit.—The word profit is one of the common place expressions of every day speech, yet it is rarely given a fixed and definite meaning. Like other technical terms of economics, it requires careful definition in order to avoid confusion of thought. As used in economics, the term denotes a type of income distinct from the other types which have been considered in the preceding study of functional distribution i. e., a share of the social income separate from rent, wages, and interest. We will now define profit and discuss what forces account for its existence and determine its amount.

In order to clearly understand what is profit, let us take a typical businessman and try to find out how he arrives at his profit. Let us assume that he owns all the necessary capital land and buildings for the business. The following account records his profit and loss for the year.

Profit and Loss account of Ramchandra for the year ending 31st December 1944.

Trading Account.

	Rs. a. p.		Rs. a. p.
To Stock 1st January 1944.	2,500 0 0	By Sales ...	45,000 0 0
To purchases ...	9,500 0 0	By Stock at 31st December 1944.	5,000 0 0
To wages ...	5,500 0 0		50,000 0 0
To power ...	1,500 0 0		
To carriage inwards ...	125 0 0		
To gross Profit ...	30,875 0 0		
	50,000 0 0		

Profit and Loss Account.

		Rs. a. p.		Rs. a. p.
To salaries	...	2,500 0 0	By Trading Account Gross Profit.	30,875 0 0
To Fire insurance	...	125 0 0		
To Trade Expenses	...	375 0 0		
To Taxes and rates	...	150 0 0		
To Depreciation on Land Buildings, Machinery and Furniture		1,500 0 0		
To light and carriage	...	500 0 0		
To Bad debts	...	1,250 0 0		
Profit	...	24,475 0 0		
		30,875 0 0		30,875 0 0

Diagram showing Analysis of Gross Profits.

GROSS PROFITS.

Reward to other agents of Production		Depreciation and Maintenance charges.	Extra Personal gains.	
Rent of entrepreneur's Land.	Interest on entrepreneur's Capital.	Wages for entrepreneur's Labour.	Monopoly gains.	Chance gains
Net or Pure Profits.				

Ordinarily when all money receipts and payment has been accounted for, the ordinary businessman may regard the net profit of Rs. 24475 as the profits for the year ending on the 31 Dec, 1944. This is in harmony with customary usage which assumes that his profits and what is left to the owner out of his business income after the deduction of payments for business costs are same. For our purpose it requires further analysis.

Rent, interest, and wages of management.—Had Mr. Ram Chandra in our foregoing example not himself owned the land buildings and capital, it would have been necessary for him to obtain their use from others. Payment for rent and interest would appear in the account ; being deducted from the

net profit for the year. But is it not necessary to make the same deductions in arriving at the profits of the business when the capital, land and buildings are owned by the businessman himself ? Let us assume that Mr. Ramchandra is using in his business land and buildings that would rent for Rs. 3,000 a year together with Rs 75,000 of capital and the rate of interest is 6 per cent. Mr. Ram Chandra might close up his business altogether and still receive Rs. 3,000 as rent and Rs. 4,500 in interest indefinitely. Clearly until the business yields net profit in excess of the sum of these two items, it cannot be said that any profits have accrued in the business. Accurate accounting requires that rent and interest be charged as business costs even when they accrue to the owner of the business himself.

But should not remuneration for the business man's own efforts be treated as a business cost in the same way as interest and rent ? If Mr. Ram Chandra decides to retire from the active management of his business and appoints a manager to perform the same function, the manager's salary would certainly have to be included to the costs of the business. Or to change the illustration, if the business was to be entirely abandoned, Mr. Ram Chandra could find employment and obtain a salary for performing services similar to those which he now renders to his own business. If his worth is such that he could get a salary of Rs. 6,000 a year from an employer it is clear that Mr. Ram Chandra is sacrificing this much salary when he devotes his salaries to his own business, and that Rs. 6,000 of the apparent net income of the business is not true business profit but it is really wages. We can call it by the name of 'wages of management.'

Rent, interest and wages all stand on the same footing as business costs. This is perfectly clear when they are actually paid out for the services of rented land, borrowed capital, and a hired manager. But they are no less present and no less costs of business when they are ascribed to the owner of the business himself for his own capital and his own labour. Returning to our previous example the net profit was calculated to be Rs. 24,475. But that was not the true profit. We must deduct out of it Rs. 3,000 for rent, Rs. 4,500 for interest, and Rs. 6,000 for wages of management. Therefore the true profit of the business was only Rs. 10,975.

Definition of profits.—We have now clearly understood the true meaning of the word profits and are in a position to define it. "True profits are the net income of a business, or the difference between the income and the costs, and cost including rent interest and wages of management whether explicit or

implicit." Or in other terms true profits include whatever is left over after to the independent businessman or entrepreneur after he has allowed himself interest, on his own capital, rent for his own land, and wages for his own labour.

Gross Profits and Net or True profits.—Now we are in a position to make a clear distinction between Gross Profits and True or Net Profits.

Gross Profits can be defined as the income of the independent businessman or entrepreneur who receives neither stipulated wages for himself, nor interest on his capital, nor rent for his land. It includes Rent on land owned by the businessman himself. Interest on capital owned by himself, and wages for management. Some writers also include in Gross Profit Depreciation of machinery, buildings etc. But this is absolutely wrong as Depreciation is always deducted from the Gross sale proceeds in order to find out Gross Profit.

What remains after these deductions are made from the gross profits is net profit. Net profit includes (a) reward for risk taking and uncertainty bearing (b) Rent of ability of an entrepreneur, (c) Any surplus or chance gains.

Risk and Profits.—We have already studied in the chapter on Organisation that the main function of entrepreneur is to undertake the risk of the business. There is risk in every business this cannot be denied. There are certain undertakings in which the risk is greater while there are others where risk is less. The modern system of production is very complex and the marketing is still more complex therefore the risk involved in modern production has enormously increased. There are many unforeseen contingencies which may upset the whole calculation of the entrepreneur and instead of a profit there may be a loss in the business. For instance fashions may change, new inventions may make the plant worthless, cheaper substitutes may be found out, and the product might have to be sold at lower prices. Moreover modern production is carried on in anticipation of future demand. The entrepreneur must study the demand for the commodity and then undertake production. If he miscalculates, the production may result in loss instead of profit. Therefore the entrepreneur must get a reward for taking the risk of the business.

Enterpriser insures the remuneration of other factors of production.—The enterpriser is essentially the man who insures the remuneration of all other factors of production and thereby relieves them of the risk involved in business or enterprise which they would otherwise have to take. For example when a businessman starts a cotton textile factory he borrows a portion of capital, and hires one thousand labourers,

Whether there is loss or profit in the factory but he has to pay wages to the labourers and interest to the bank. Therefore the risk of the business is entirely shouldered by the enterpriser himself.

It is quite possible for a group of labourers to borrow capital, build their own factory and run it. But if they did so they would always be in danger of losing not only what they themselves had invested but even their wages for a time that is to say, if there should come a bad season when the demand for products fell off, they might have to work for very low wages or for none at all. If some individual (entrepreneur) or group of individuals undertake to run the business for them or guarantee them a certain fixed rate of wages, they are relieved of that risk.

Risk bearing is irksome and disagreeable and therefore it is necessary to offer reward to induce men to undertake it and enter a business. So few enter into these enterprises as to leave for those who do make the venture comparatively little competition. This enlarges their opportunities for a profit.

Pure or Net Profit.—The balance of Gross Profit which remains after making the foregoing allowances may be regarded as pure-net profit due to the performance of the strict function of the entrepreneur. Even here further subdivision is made into :—

(1) **Insurance against risk**, that is the reward which must be handed over to the entrepreneur for assuming the risk which is inseparable from all business under the present system of production in expectation of future demand.

(2) **Rent of ability**, that is the reward which accrues to the entrepreneur by reason of the fact that he is a superior entrepreneur than the marginal entrepreneur whose output is needed to meet the existing demand.

(3) **Surplus Profits.**—In surplus profits we include any chance gains accruing to the entrepreneur or any monopoly gains due to the possession of some monopolistic advantage.

Some economists do not recognise the payment for the assumption of risk as a part of pure or net profit. They maintain that it should be classed with other deductions made from gross profits in order to determine net or pure profits. But the assumption of risk is essentially a function of the entrepreneur, the greater his courage and willingness to undertake risks, the larger the rewards are his.

Insurance against risk.—We have already discussed that under the present system of production which is always in

anticipation of a demand there is risk involved and the entrepreneur undertakes the risk and thereby makes production possible. The risk varies in different businesses and therefore the remuneration needed to induce entrepreneurs to enter that business will also vary. For instance if the Glass industry in India is very risky and the chances of success are few then the rate of profit in glass industry must be high otherwise no entrepreneur will undertake the tremendous risk involved. In fact many of the entrepreneurs will fail and their capital will be lost. Only a few who possess exceptional organising ability will succeed. Therefore the remuneration of the entrepreneurs in such industries should be high enough to attract capital and entrepreneurs.

Rent of ability.—There are different grades of entrepreneurs some very superior and some marginal ones who just manage to keep their heads above the water and receive only 'normal profit.' It is assumed that the total production needed cannot be supplied by only the superior ones. Thus 'average' or the 'representative firm' i.e., the marginal producer must remain in the field of production. The cost of production expenses of the average firm will determine the price of the commodity produced. The average firm is assumed to make a reasonable though not an excessive rate of profit, and that rate is described as the 'normal profit' for the industry. This profit will form part of the marginal cost of production which determines the price of the product, but any profit made by a superior entrepreneur in excess of this minimum forms a personal rent and will not enter into the normal supply price. On the other hand least capable producers may make no profits at all and may even incur a loss, but in the long run they are forced out of production.

The conception of profit as a rent of ability thus remains, but it is held that the rent of ability (profits) is measured not from an utterly inferior or no-profit entrepreneur, but from the level of the entrepreneur who earns a normal profit which enters into the price.

Surplus Profits.—Modern economists recognise that part of the profit which accrues to some business, is due, not to the superior abilities of the employer but to non-personal causes. For example, a business may be in a possession of monopoly advantage over its competitors which enable it to obtain monopoly gain over and above ordinary profits. For example, if a factory is in possession of a patent right or a better formula of producing certain article that firm will have a great advantage over its competitors. Again due to the occurrence of an unexpected event or due to unforeseen causes a business may reap huge profits which are known as 'chance gains.' For example the

sudden outbreak of war may result in very high prices for some articles and those firms which had a large stock of those articles would reap very high profits. These are mere chance gains and are not the result of personal ability of the entrepreneur.

Tendency of Profits to fall.—In the chapter on Interest it was pointed out that interest has a tendency to fall. A similar tendency appears as regards profits. As business knowledge increases and becomes diffused so that it does not remain a monopoly of a few, as inventions spread and a large and increasing number of entrepreneurs obtain access to new inventions, and processes, as the organisation of business develops and becomes more or less a routine work, and as the business ability increases rapidly with increasing opportunities of obtaining business education and training, so do the opportunities to make exceptional gains tend to become less frequent and profits tend to lower levels.

Justification of profits.—In modern times Socialists have severely criticised profits. All value according to Socialists is due to labour, and must go to labour. The surplus value, which is profit is something taken away from the share of labour. Profit therefore according to Socialists is 'legalised robbery.'

But profits are the inevitable outcome of the institution of private property. If profits are not allowed to entrepreneurs they will not undertake the risk of the business and without enterprise the productive activity will be checked. Ordinarily we are attracted towards the profits of successful businessmen but we forget that many have lost their fortunes in undertaking a venture. Therefore profits are absolutely necessary to induce enterprisers towards industry and trade.

The entrepreneur by undertaking the risks of the business, and by directing the productive organisation renders useful services to the society for which he must be paid. By his superior organising ability, by his boldness in shouldering the risks the entrepreneur increases the productivity of the economic organisation. If we stop profits, under the present organisation of the society, which allows private ownership and private property it would mean the abolition of progress.

Of course if ownership of private property is abolished from the society and the state undertakes to carry on productive activities then profits to individuals will not be necessary.

But this does not mean that the entrepreneurs may be allowed to adopt all those tactics and objectionable practices which they are accustomed to adopt in order to swell their share in the social wealth i.e., profits. The employer swells his profits by paying labourers less than their marginal worth, or by

sweating the helpless worker or by over working the labourers. Industrialists bribe the legislators so that high duties may be levied on the imported articles. Industrialists may establish a monopoly on some industry and thereby secure unjust monopoly profits. By speculating and manipulating on the stock exchanges and commodity markets the speculators may become rich. A war may bring a great opportunity for businessmen and they do amass fortunes at the cost of poor consumers. There are innumerable other ways of making huge profits by foul means. This should not be allowed by the state and the state should interfere with such malpractices.

CHAPTER XXVIII.

DISTRIBUTION OF WEALTH AND INEQUALITY.

Before Industrial Revolution which was caused by the invention of machinery and mechanical power *i.e.*, steam and electricity ; production of wealth was carried on on a small scale. Large scale production is the outcome of those inventions which brought about Industrial Revolution and the establishment of factory system.

Formerly agriculture and handicrafts were the main occupations carried on by the people. Machines and mechanical power were unknown, simple tools and implements were all the capital needed by the artisan. The artisans were independent producers, they mostly did not serve any employer as wage earner because the capital needed to establish and carry on independent production was so little that it was within means of everyone of them .

But large scale production necessitates huge capital investment in mills and factories. The building, plant and raw material needed to run a modern factory require huge capital investment which is altogether beyond the means of poor artisan. Thus arose a class of capitalists who alone could finance modern industry. These capitalists were very few and the vast army of artisans were reduced to the position of labourers who had no other alternative but to work in these factories and earn a wage for their living.

The capitalist was the receiver of very high profits because in the beginning their power was supreme. They could exploit the workers to any extent. The state did not interfere with them. Thus this small class of capitalists amassed enormous wealth and became fabulously rich. The profits of the industry were re-invested in the industry again and as such their riches went on multiplying. On the other hand the vast majority of population not only lost its independence but was reduced to abject poverty. The inequality of wealth in the society became very acute. Thus the inequality of wealth in the society was to a very great extent due to the large scale production. Large scale production brings into existence a class of capitalists who finance production of wealth and secure very high profits.

Inequality of wealth did exist even before the industrial revolution but it was not at all so acute and dangerous as it is to-day. In those days of small scale production chances of becoming too rich were few. But in the modern system the rich is becoming still more rich and the poor is becoming poorer.

The capitalist tries to pay lowest possible wages to the labourers. The farmer is made to pay high rents to landlords and a very high rate of interest to moneylenders. Being a debtor and small scale producer he is exploited by a host of middlemen who pay to the farmer a low price for his produce. Thus vast majority of labourers, artisans, and cultivators are being exploited and are paid very low remuneration so that they can not satisfy even necessary wants and their standard of living is extremely low. While a small class of capitalists and businessmen is rolling in wealth.

Causes of inequality of wealth.—There are two causes of inequality of wealth in the society :—

1. Differences in personal abilities and capacity.
2. Circumstances created by Social organisation.

1. **Differences in personal abilities and capacities.**—Every body is not equally able and capable ; there are persons who are gifted with special ability and capacity to do any work. They are bound to be successful and earn more than others who are less gifted in these qualities. Thus to some extent inequality of wealth is bound up with natural difference in ability and capacity to do the work.

2. **Another cause of inequality of wealth in the society is bound up with the existing social organisation.** For example, some persons inherit wealth which their forefathers have accumulated while others do not get a single pie. Some of us are in a position to earn more but a large number of persons are disallowed the opportunity of earning more by their circumstances though they possess the required ability and guts. This is an every day experience that highly capable, intelligent and able persons work as managers, or assistants in factories and business houses on comparatively low salaries, but their employers who are much less capable secure enormous profits and exploit them. The only quality which these employers possess is that they are the owners of capital. Gradually those whose income is low are reduced to such a sad state of affairs that they become less efficient because of their low standard of living. The poor persons cannot give higher education to their sons and their standard of living becomes low. This reduces their efficiency and capacity to work, and therefore they can never dream of improving their lot. Those who possess capital control the production and therefore exploit the labour factor and get rich very soon. While the large mass of labouring population remains steeped in poverty and ignorance.

Therefore it follows that the inequality of wealth which is due to the difference in the personal ability and capacity is to

some extent natural. But the inequality of wealth created by the defective social organisation is not at all justifiable and proper. Every individual must have the opportunity of improving his efficiency and to earn the utmost he is capable of. In the existing circumstances the poor persons do not get this opportunity.

Evils of inequality of wealth.—The following are the evils arising out of inequality of wealth distribution :—

(1) The different classes in the society come to clash, they suspect each other, there is no good will and the peace of the society is disturbed. There is a constant struggle between haves and have nots ; these classes treat each other as their enemy.

(2) When inequality of wealth is wide spread and takes an acute form the great majority of people do not get enough income to satisfy even their barest necessities and therefore they degenerate both physically and intellectually. Thus inequality of wealth is the greatest factor which brings about degeneration of vast masses of people in the society.

(3) The inequality of wealth also brings into existence a small class of wealthy persons who become most influential in the society and who exploit and ill-treat the poor persons. Even the Government becomes a tool in their hands and thereby they make laws which help the wealthy person in exploiting the poor ones even more.

Methods of doing away with inequality.—Inequality of wealth can be reduced by (1) securing high and reasonable wages for labourers. By organising labourers into Trade Unions and by passing Minimum Wage Laws so that no employer should be allowed to pay lower wage than fixed by law and (2) by taking away the wealth of the rich in the form of higher taxes which will fall only on the rich. For example by levying higher duties on articles of luxury, by charging very high rate of income tax and by levying " Death Duties " on the rich. So that when a wealthy man dies and passes on his accumulated wealth to his heirs the state may take a substantial portion of that wealth as Death Duty. If wealth so got from the rich is spent for the benefit of poor inequality of wealth will be reduced to some extent. These methods can only reduce the inequality of wealth to some extent but by (3) establishing socialism inequality of wealth can be removed to a very great extent.

Socialism.—As mentioned above socialism is an important method of removing the inequality of wealth from the society. According to Karl Marx, the father of modern socialism inequality

of wealth is the result of modern capitalism. Socialists believe that land is the gift of nature and therefore it should belong to the whole society and not to individuals. Thus land being a gift of nature 'Labour' is the only factor which produces wealth and hence the labourers are the rightful owners of all produced wealth. In a socialistic society production and exchange of wealth will be carried on by the state and the state will be dominated by labourers. No individual is allowed to possess property and set up factories or his own business. The activities of production and exchange are carried on by the state. So far socialism has been adopted only by Soviet Russia.

In order to bring about socialistic organisation socialists want to destroy the present capitalistic system. Because in their opinion the capitalists pocket the major portion of wealth produced by the labourers and pay them very low wages. This profit making is inevitable in the present day capitalistic system and therefore they want to replace it by socialistic organisation. This will mean that the state will carry on the activities of production and exchange of wealth, no body will be allowed to receive rent, interest or profit. Every individual will have to labour for producing wealth and will get wages. In determining wages the requirements of labourer will receive due consideration. It is clear that wealthy people will not leave their property, factories etc. for asking. This form of organisation can only be brought about by a revolution and therefore socialists want to bring about a social and political revolution in order to destroy the existing organisation and to set up socialistic organisation instead.
